REPORT RESUMES

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TEACHER CHARACTERISTICS IN SELECTED MIDDLE AND LOW INCOME AREA SCHOOLS OF THE MINNEAPOLIS PUBLIC SCHOOL SYSTEM WITH PARTICULAR REFERENCE TO TEACHER RETENTION. RESEARCH REPORT.

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AS PART OF THE WORK OF THE YOUTH DEVELOPMENT PROJECT FOR DELINQUENCY PREVENTION, THIS STUDY COMPARED LOW-INCOME AREA (TARGET) AND MIDDLE-INCOME AREA (COMPARISON) SCHOOLS TO EXAMINE THE DIFFERENCES IN THE TEACHING STAFFS AND THE TEACHER RETENTION TURNOVER RATES IN THESE SCHOOLS, AND TO ANALYZE THE DIFFERENTIAL EFFECTS OF THESE RATES. ALL OF THE TEACHERS IN THE 11 TARGET AND 10 COMPARISON SCHOOLS DURING THE PERIOD FROM 1958 TO 1963 WERE INCLUDED IN THE STUDY. SUBSTANTIAL DIFFERENCES IN STAFF COMPOSITION WERE FOUND IN THE ELEMENTARY AND JUNIOR HIGH SCHOOLS BUT NOT IN THE HIGH SCHOOLS. FOR EXAMPLE, THE TEACHERS IN BOTH THE TARGET AND COMPARISON HIGH SCHOOLS TENDED TO HAVE THE SAME SOCIOECONOMIC STATUS. IN GENERAL, HOWEVER, TARGET SCHOOL TEACHERS WERE YOUNGER, HAD LESS EXPERIENCE (TURNOVER-PRONE), AND WERE LIKELY TO BE ACQUIRED DIRECTLY FROM COLLEGE. RETENTION RATE WAS HIGHER IN MIDDLE-INCOME SCHOOLS AT ALL LEVELS, AND WAS FOUND TO BE CORRELATED WITH SCHOOL LEVEL, AGE, EXPERIENCE, SEX, EDUCATION, AND MANNER OF ACCESSION. THE FACTORS RELATED TO RETENTION WERE DIFFERENT IN TARGET AND COMPARISON SCHOOLS. IN GENERAL, IT APPEARED THAT SOCIOECONOMIC FACTORS ARE IN A "SUBORDINATE, BUT CATALYTIC," RELATIONSHIP WITH BROADER "'CAREER EXPECTATIONS'" SUCH AS AGE AND SEX IN AFFECTING TEACHER TURNOVER. (AN APPENDIX CONTAINS A SUMMARY OF PERSONNEL PRACTICES IN THE MINNEAPOLIS SCHOOL SYSTEM. THERE ARE 45 TABLES OF DATA AND A LIST OF REFERENCES.) (EF)

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TEACHER CHARACTERISTICS IN SELECTED MIDDLE AND LOW INCOME AREA SCHOOLS OF THE MINNEAPOLIS PUBLIC SCHOOL SYSTEM

P. C.

A RESEARCH REPORT

MARCH 1967

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TEACHER CHARACTERISTICS IN SELECTED MIDDLE AND LOW INCOME AREA SCHOOLS OF THE MINNEAPOLIS PUBLIC SCHOOL SYSTEM

WITH PARTICULAR REFERENCE TO TEACHER RETENTION

by

R. W. FAUNCE

and

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Minneapolis, Minnesota
March 1967

SUMMARY

A sample of teachers in low income (Target) area public schools in Minneapolis was compared with a sample of teachers from middle income (Comparison) schools. Target school families had an average income of $4,979. One-third of the children in these schools were not living with both natural parents. One in four was non-white. Delinquency rates were approximately twice the city average. Comparison school families had an average income of $7,381. Ten per cent of these children came from broken homes. Less than one per cent of all Comparison children were non-white. Delinquency rates were approximately one-half the city average. (See page 3.)

Teaching staffs for the school years 1958-59 through 1962-63 were compared. Substantial differences were found at the elementary and junior high school levels but not at the high school level. (Target and Comparison high schools also exhibited much greater overlap on socio-economic status than did elementary or junior high schools.) Target school teachers were younger, had less teaching experience, were more likely to be acquired directly from college, and were less likely to be without a four year degree. Comparison school teachers were older, more experienced, were more likely to have entered their school by transferring from another Minneapolis school, and were more likely to be without a four year degree. Non-degree teachers were typically older teachers with two-year certificates from normal schools. The higher concentration of non-degree teachers in Comparison schools suggests selective transferring over the years. Target and Comparison school staffs did not differ in distribution of teachers according to sex and marital status.

Major differences in staff composition were found at the junior high school level. In two of the three Target junior high schools only 15% to 16% of the staff was between the ages of 36-60. Approximately 85% of these staffs were made up of either young, inexperienced (turnover-prone) teachers or teachers who were nearing retirement. The percentage of new teachers acquired by transfer was three times greater in Comparison junior high schools than in Target junior high schools. (See pages 45-46.)

Retention of teachers *in the same school* was explored using the 1958-59 staff as a base. Retention was higher in middle income schools at all school levels. At the junior high level 39% of Target school teachers and 61% of Comparison school teachers were retained in the same school for the five years studied. For all schools combined, 50% of Target teachers and 61% of Comparison teachers were retained. (See page 50.)

Retention was found to be correlated with school level, age, experience, sex, education,and manner of accession. Retention was higher in high schools, for older teachers, for teachers with greater amounts of teaching experience, for teachers with advanced degrees or *without* four year degrees, for males, and for teachers acquired by transfer. The highest correlations were between retention and age (.399) and retention and experience (.344). Marital status was unrelated to retention in the total sample. (See page 88.)

Factors related to retention appeared to play a somewhat different role in Target and Comparison schools. Sex and school level were related to retention in Target schools but not in Comparison schools. Manner of accession was related to retention in Comparison schools but not in Target schools. Age and experience were correlated with retention in both samples. Education and marital status were not related to retention within either sample. (See page 89.)

When equated for age, sex, school level, and experience, differences in retention between Target and Comparison schools disappeared for male teachers but not for female teachers. Female elementary and junior high school teachers in low income areas had consistently lower retention at all age levels and for all amounts of experience with the sole *exception* of younger teachers (35 and under) with little or no experience. Significant differences in retention occurred among older, experienced female teachers. (See pages 99-104.)

Results of this study generally confirm investigations of Becker, Winget, and Charters. However, the findings of differential retention among older,

experienced, female teachers suggests that socio-economic factors may play a more pervasive part in teacher retention than previously attributed to them. A theoretical view is described which places socio-economic factors in a subordinate, but catalytic, relationship with broader "career orientation" factors such as age and sex. (See page 112.)

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Mrs. Linda Hirshen typed the manuscript and contributed to the statistical analysis.

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TEACHER CHARACTERISTICS IN SELECTED MIDDLE AND LOW INCOME AREA SCHOOLS

SECTION I

PURPOSE OF THE STUDY, SAMPLE SELECTION, AND DEFINITIONS

This study grew out of the work of the Youth Development Project (YDP), a delinquency prevention demonstration project which focused on two Target Areas near the heart of Minneapolis. The all-too-familiar problems facing inner city youth were very much in evidence in these Target Areas. These problems have been described in detail elsewhere (Community Health and Welfare Council of Hennepin County, Inc., 1965; Faunce, R. W., Bevis, D. D., & Murton, Bonnie J., 1965; Murton, Bonnie J., & Faunce, R. W., 1966) and will not be dwelt on at length in this report. However, a brief summary of some of the more pertinent problems is given in the section on sample selection.

The basic stimulation for the study came from the widely held belief that teacher retention rates in "disadvantaged" schools are much lower than retention rates of teachers in middle or upper income schools. It was argued that teachers in downtown schools are faced with such overwhelming problems of discipline, delinquency, lack of respect for education and lack of parental support for education, that they soon become discouraged and transfer to more favorable teaching environments or leave the teaching profession entirely.

This belief is, apparently, one of those "obvious facts" which need little objective support, for little documentation exists to support this commonsense viewpoint. Becker's study (1952) in the Chicago schools appears to be the wellspring for this widely held notion. His study, however, involving interviews with only 60 teachers, must be considered as suggestive rather than definitive. Certainly, additional information is needed if his thesis is to be generalized to school systems in other cities.

The focus of the YDP was on children; specifically, children living in the Target Areas. If Becker's thesis were applicable to Minneapolis then Target Area schools would be expected to have a different faculty composition than schools in higher income areas of the city. Younger, less experienced teachers would be found in the Target Area schools with transfer requests being made, typically, away from rather than to the inner city schools. Long range effects of such staffing patterns would probably be detrimental to the children's educational progress.

PURPOSE OF THE STUDY:

The goal of the study was to answer four questions:

1. Do Target and Comparison school teaching staffs differ? (Factors investigated were age, sex, marital status, education, teaching experience and method of accession.)
2. Are retention rates lower in Target Area schools than in Comparison schools?
3. What are some of the factors related to teacher turnover in the Minneapolis Schools?
4. Do these factors operate differently in Target and Comparison schools?

SAMPLE SELECTION:

The School Sample

Initially, the six elementary schools within the YDP Target Areas were selected for study. Subsequently, one of these six schools was dropped as its recent construction made it impossible to observe teacher retention over a lengthy time period.

Six elementary schools in various sections of the city were studied for comparative purposes. These schools were originally selected because of low delinquency rates among youth residing in these school districts. In this report they are called Comparison schools.

A brief descriptive summary of certain characteristics related to these two groups of schools is shown in Table 1. Income and delinquency data are based on census tracts which approximate the school districts while racial data are based on sight counts made in the schools.

Table 1

Descriptive Characteristics of Target (T) and Comparison (C) Elementary School Samples

School No.	Median family income[a]		Per cent non-white students[b]		Per cent of youth contacted by police[c]		Per cent of children living with both natural parents[d]	
	T	C	T	C	T	C	T	C
1	$5,302	$8,268	22.4	.0	10.7	3.6	49	84
2	3,432	8,264	58.3	.0	10.3	2.8	65	95
3	5,455	7,714	18.9	.2	7.6	2.7	71	88
4	4,975	6,007	28.1	1.4	10.7	3.7	73	86
5	5,460	6,581	6.1	.7	8.5	2.3	72	93
6	-	7,549	-	.0	-	1.8	-	-
All Schools	$4,979	$7,381	26.9	.4	10.4	2.9	66%	90%
City of Mpls.	$6,401		8.8		5.7		N.A.	

[a] Weighted medians derived from 1960 Census.

[b] Minneapolis Star, December 15, 1965.

[c] Faunce, R. W., & Murton, Bonnie J., 1965.

[d] Faunce, R. W., Bevis, D. D., & Murton, Bonnie J., 1965, p. 17.

Table 1 shows that the median income of families residing in Target Area elementary school districts was below the city average while the median income of families living in Comparison school districts was above the city average, except in one distict. Target families averaged $1,400 less than the average family in the city while Comparison families averaged approximately $1,000 more than the city average. Thus, the difference in family income between the average Target and average Comparison family was approximately $2,400.

There were no non-white students in three Comparison schools. Attendance by non-white children at the other three Comparison schools was negligible. By contrast, one out of four students in Target elementary schools were non-white. (In the entire city of Minneapolis, approximately 5% of all elementary school children were non-white during the period under observation for this study.) Tabled figures show non-white percentages for 1965.

Delinquency rates in Target Areas were typically twice the city average while rates in Comparison school areas were typically one-half the city average.

Data previously reported (comparing the six Target schools with five of the six Comparison schools) showed that one out of three Target elementary school children came from a broken home (Faunce, Bevis, & Murton, 1965). In one Target school fewer than half the children lived with both natural parents. Only one out of ten Comparison children was living in a broken home.

In short, although these two groups of schools may not represent the extremes of the socio-economic continuum, ample evidence exists to show that these two groups of schools were widely separated on that continuum.

Because teacher retention has been shown to be related to grade level (Danow, 1961; Morris, 1957) samples of secondary schools were also investigated. Three junior high schools and two senior high schools fed by the Target elementary schools were selected. Two junior high and two senior high schools fed by Comparison elementary schools were also included.

Economic differences between Target and Comparison Junior High Schools were quite distinct with very little overlap. The range in family income for the 14 elementary school districts feeding the Target junior high schools was $3,432 to $6,177. The range of family income was $5,901 to $8,662 for twelve Comparison feeder school districts. All Target feeder school districts were below the city average (6,401) in family income. Only two of the twelve Comparison school districts were below the city average and only two Comparison feeder schools were as low as the highest Target feeder school average.

Negro students in the three Target junior high schools constituted 12%, 13%, and 27% of the student populations in 1963 (Minneapolis Tribune, 1963). In one Comparison junior high 3% of the student population was Negro and in the other school none of the students were Negro.

Delinquency rates ranged from 7.2% to 13.5% in Target elementary feeder schools and from 1.6% to 7.2% in Comparison feeder schools. Only one Comparison feeder school district had a delinquency rate as high as the lowest Target feeder school.

Elementary and junior high school samples of Target and Comparison schools were clearly separated in terms of the socio-economic indicators used. This was not the case at the high school level.

High school districts in Minneapolis covered such wide geographic areas that it is somewhat misleading to refer to any of them as Target schools. High school students came from much more diverse neighborhoods than did elementary and junior high children. Because of this increased variance a much greater overlap was expected between Target and Comparison high school populations even though Target high schools encompassed the fourteen Target junior high school feeder districts (as well as other feeder districts) and

Comparison high schools encompassed the twelve Comparison junior high feeder districts. A total of thirty-two elementary schools were included in Target high school districts and eighteen elementary schools served the two Comparison high schools. Family income ranged from $3,432 to $6,987 in Target school districts and from $5,244 to $9,185 in Comparison school districts. Families in two-thirds (23) of the Target feeder schools had incomes greater than the average family in the poorest Comparison feeder school district. Families in ten of the eighteen Comparison feeder districts had lower incomes, on the average, than the family income in the wealthiest Target feeder school district. Although median differences in family income were substantial, $5,794 to $6,788, the complete separation exhibited by elementary and junior high school Target and Comparison samples was not apparent.

Negro students made up 4%, 9%, and 14% of the Target high school populations. One Comparison high school had no Negro students while the other had less than one per cent.

Delinquency rates ranged from 1.4% to 15.5% in Target high schools and from 1.6% to 15.2% in Comparison high schools. Despite substantial median differences there was much overlap.

The Teacher Sample

All teachers listed in Minneapolis School Directories for the years 1958-59 through 1962-63 who taught in the selected schools were included in the study. These years were selected in order to yield a picture of teacher characteristics and retention just prior to the delinquency demonstration project which was to have begun in 1964.

The sampling distribution for schools and teachers is shown in Table 2.

Table 2

Number of Schools and Teachers in the Study (1958-59 to 1962-63 inclusive)

	Target	Comparison	Target & Comparison	Total school system 1958-59
Schools				
Elementary	5	6	11	75
Junior High	3	2	5	13[a]
Senior High	3	2	5	11[b]
All Levels	11	10	21	99[c]
Teachers				
Elementary	228	187	415	1,286
Junior High	225	165	390	512
Senior High	262	181	443	751
All Levels	715	533	1,248	2,549[d]

[a] Includes one elementary-junior high combination.

[b] Includes three junior-senior high combinations and one vocational school.

[c] Excludes one special school.

[d] Figures for total school system show all certified personnel (e.g. principals, librarians). Staffs of the special school and the elementary-junior high combination were not included.

Sampled schools represented 21% of all Minneapolis Public Schools in existence during the 1958-59 school year. School sampling was more adequate at the secondary level than at the elementary level. Thirty-eight per cent of junior high schools and 45% of all high schools were included in the study, but only 15% of all elementary schools were included.

The percentage of all teachers sampled cannot be obtained from Table 2 since tabular entries show the accumulative number of teachers sampled for the years 1958-1962. Teachers contracted for the 1958-59 school year formed the basic sample for studying retention. These teachers constituted 28% of all certificated personnel in the school system that year (703 of 2,549). Sample sizes were 16% of all elementary professional personnel (201 of 1,286), 39% of all junior high professional personnel (201 of 512) and 40% of all high school professional personnel (301 of 751). The percentage of classroom teachers sampled was somewhat greater than these figures indicate since non-teaching certificated personnel, such as principals and librarians, were included in the totals for certificated personnel.

In summary, approximately one out of every five schools and more than one out of every four classroom teachers were included in the study.

DEFINITIONS AND DATA COLLECTION:

Basic data were obtained from school Directories for the years 1958-59 through 1962-63. A teacher's name in the Directory signified that she had signed a contract for that school year. However, it did not signify that she would necessarily complete the year. This fact must be taken into consideration when retention rates are discussed.

Additional data were obtained from personnel files. These records were used to determine name changes, reasons for termination, education, previous teaching experience, and other information.

In comparing characteristics of teachers in Target and Comparison schools it is important to keep in mind that the school "staffs" in these comparisons consisted of all 1958-59 teachers who had been on the staff prior to 1958-59 plus all teachers joining the staff from 1958-59 through 1962-63. For example, if a school had 30 teachers returning to its staff in 1958-59 and if two "new" teachers were added to the staff each year from 1958-59 through

1962-63 then the total staff for purposes of our description would be 40. Staff size would probably not be 40 in 1962-63 since some teachers, including some of the 10 "new" teachers, would have left the school.

This approach can give a misleading picture of total staff composition for any single year. In examining the age distribution, for example, our approach would tend to yield a picture of younger staffs than is actually the case. Since age distribution, in this study, includes the basic staff of experienced teachers plus all new teachers acquired over a five year period and since the retention of newer and younger teachers is typically poorer than the retention of experienced teachers the staff for any one year might consist of mostly older, experienced teachers plus a few new teachers. The following year the staff might have the same composition but the new teachers would be replacements for the "new" teachers of the previous year. This approach does have value in that it shows the total teaching experience for a school or a group of schools over a lengthy time period as opposed to the usual cross-section description.

In this study the focus is on retention of teachers in specific low income schools. Our definition of "retention" is thus not the usual one. Retention, in this study, means that the teacher taught in the same school for the five year period 1958-59 through 1962-63. More accurately, it means that a teacher contracted to teach in the same school for that time. Since some teachers who contracted to teach in 1962-63 were unable to fulfill their contracts reference to a "five year retention rate" is not completely accurate. Teachers who transferred to other Minneapolis schools as well as those who left the system or the profession were considered as not retained.

This definition of retention poses some logical problems. Should a teacher who transfers from one Target school to another Target school be considered as a loss to inner city schools? By our definition she was. Problems of this type will be dealt with as they crop up.

In like manner, "new" teachers were all teachers who entered a specific

Target or Comparison school during the five year period. Previous experience or location was immaterial. Thus, a teacher transferring from Target school A to Target school B and a graduating college student taking her first teaching job would both be "new" by our definition.

STATISTICAL TESTS:

Probability values of .10 or less are reported. Values greater than .10 usually are shown as n.s., not significant. All probability values should be read as "equal to or less than" even though the "less than" symbol (<) is omitted.

Two-tailed tests, when applicable, were used throughout the study. In spite of the fact that certain one-tailed hypotheses could have been generated, our feeling was that much "evidence" in the literature is hearsay and that a more conservative approach is in order.

SECTION II

CHARACTERISTICS OF TARGET AND COMPARISON SCHOOL TEACHING STAFFS

This section compares certain characteristics of teaching staffs in Target and Comparison schools. Characteristics studied are age, sex, marital status, education, teaching experience, and manner of accession.

Frequent reference is made to a study of personnel policies and procedures in the Minneapolis public schools conducted by the Bureau of Field Studies and Surveys of the University of Minnesota (1964). Among other things, the Bureau compared certain characteristics of teaching staffs in a sample of schools located in "High" and "Low" socio-economic neighborhoods. The method of selecting the schools and criteria for designating "High" and "Low" samples were not given in the report.

Although the Bureau's study was not primarily concerned with socio-economic comparisons there is some overlap with the interests of the present study. Both studies compared teaching staffs in high and low socio-economic neighborhoods. Both studies investigated age, experience, and education. Major differences in the two studies are purpose, period of data collection, and (probably) in sampling procedures.

The Bureau's study focused on personnel practices, of which socio-economic level of the school was but one facet. The present study is concerned primarily with socio-economic differences and their effects.

Data for the personnel practices study were collected for the 1963-64 school year. Data for the present study were collected for 1958-59 through 1962-63 inclusive.

The Bureau's sample of High and Low socio-economic neighborhoods probably differs from the sample in the present report. However, since sampling procedures were unspecified by the Bureau it is impossible to ascertain what differences do exist. An attempt was made to obtain sampling information from the Bureau, but its records had been destroyed.

Characteristics of Target and Comparison School Teaching Staffs: SEX DISTRIBUTION

A teacher's sex appears to be an extremely important variable in the consideration of adequate teaching staffs for disadvantaged children. Sexton (1959), for example, pointed out the need for more male teachers in low income schools in order to provide disadvantaged youth with models of successful adult males. In view of the large number of Target Area children coming from broken homes (one out of three) this appears to be a reasonable viewpoint. However, other factors, such as teaching effectiveness, must also be considered and on this point the evidence is far from clear (Ryans, 1960, pps. 127, 296).

Before proceeding it should be emphasized that the staff characteristics under study do not, per se, insure adequate or "good" educational programs. This point was well made in the Bureau of Field Studies report.

> Naturally no single characteristic of any staff will guarantee a good (or poor) school program, but the research background leading to the identification of these factors indicates that high degrees of these characteristics in combination are consistently found in high quality school systems and are lacking in school systems of poor quality.

Obviously, this viewpoint applies even more strongly to characteristics of individual teachers.

Assuming the correctness of previous research, which showed that school systems of high quality tend to have a higher percentage of male teachers, how do Target school staffs stack up against staffs in the higher income

Comparison schools? Table 3 shows that at each school level - elementary, junior high, and senior high - no significant differences existed in sex distribution of Target and Comparison staffs. The nonsignificant differences which did occur showed a higher percentage of male teachers in Target schools at all levels. Overall, Target staffs had 40% male teachers while Comparison staffs had 36% male teachers.

Males constituted the majority of Target School staff members at the junior and senior high level (53% at each level). Only 14% of the staff was male in Target elementary schools.

Column five of Table 3 shows the sex distribution for all certified personnel in the Minneapolis Public Schools. Since this group included principals and central office personnel and since the data were gathered for a later time period (1963-64 vs. 1958-59 through 1962-63) a direct comparison cannot be made between Target and Comparison samples and the total. The figures generally support the view, however, that the sex distribution of teachers in Target and Comparison schools is representative of the total school system. Sampling error and the time difference in data collection could easily account for the variations which do exist.

Sex Distribution in Individual Target and Comparison Schools

An analysis of the sex distribution in individual Target and Comparison schools gave no indication that the general findings were caused by one or two atypical schools. Variation did exist, of course, but at approximately the same degree in Target and Comparison samples.

The percentage of males ranged from 8% to 21% in Target elementary schools and from 4% to 21% in Comparison elementary schools. At the secondary school level, males constituted from 42% to 65% of Target school staffs and from 44% to 54% of Comparison school staffs. Statistical tests revealed no significant difference in the distributions of male teachers throughout individual Target and Comparison schools at either elementary or secondary

Table 3

Characteristics of Target and Comparison School Teaching Staffs: Sex Distribution by Elementary, Junior High, and Senior High School Levels, 1958-59 through 1962-63

Sex	Target	Comparison	Target plus Comparison	Total professional staff - 1963-64[a]
Elementary				
Female	86.0%	89.8%	87.7%	83.9%
Male	14.0	10.1	12.3	16.1
Total %	100.0%	99.9%	100.0%	100.0%
Total N	228	187	415	1,246
Junior High				
Female	47.1%	51.5%	49.0%	47.1%
Male	52.9	48.5	51.0	52.9
Total %	100.0%	100.0%	100.0%	100.0%
Total N	225	165	390	584
Senior High				
Female	47.1%	49.7%	48.1%	40.3%
Male	52.9	50.3	51.9	59.7
Total %	100.0%	100.0%	100.0%	100.0%
Total N	262	181	443	799
All Levels				
Female	59.7%	64.4%	61.7%	63.0%
Male	40.3	35.7	38.3	37.0
Total %	100.0%	100.1%	100.0%	100.0%
Total N	715	533	1,248	2,885

[a] Includes all certificated personnel (e.g. principals, central office staff) (Bureau of Field Studies and Surveys, 1964).

Target vs. Comparison	Chi-square	p
Elementary	1.09	n.s.
Junior High	.57	n.s.
Senior High	.23	n.s.
All Levels	2.58	n.s.

d.f. = 1 for all comparisons

levels (Wald-Wolfowitz runs test; $p > .05$; Siegel, 1956).

An Analysis of Trends in the Acquisition of Male Teachers

Little change was noted in the male-female staff ratio for Target and Comparison schools over the five years studied. The sex distribution of newly acquired teachers did little to change the male-female distribution which existed prior to the 1958-59 school year. In short, there was no trend toward hiring a greater number of males. It should be noted, however, that compared with a reference group of 125 schools in 38 states the Minneapolis school system had a favorable percentage of male teachers. (Bureau of Field Studies and Surveys, 1964, p. 20.)

The following figures show the percentage of new teachers which was male for each of the school years from 1958-59 to 1962-63.[1] Figures are shown for the elementary school samples only. Results for secondary school samples were similar.

	Per cent of returning 1958-59 staff which was male	Per cent of new teachers which was male[1]				
		1958-59	1959-60	1960-61	1961-62	1962-63
Target Elementary Schools	15	19	4	17	10	14
Comparison Elementary Schools	10	6	4	17	15	11

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[1] For purposes of this discussion, "new" teachers refer to all teachers joining the school staff regardless of previous occupation or location. Thus, a Target school teacher transferring to another Target school would be included on the same basis as a beginning teacher just out of college. Returning teachers are those who had been under contract at the same school in 1957-58 and 1958-59.

Only 33 men entered the eleven Target and Comparison schools over the five year period. The percentages shown are thus highly unstable, but certainly their irregularity does not indicate a trend toward the acquisition of more males.

Characteristics of Target and Comparison School Teaching Staffs: AGE

Becker's (1952) study of Chicago school teachers suggested that younger teachers typically began their teaching careers in slum area schools. Winget (1952) provided quantitative support to Becker's hypothesis from another study of Chicago school teachers.

In Minneapolis, The Bureau of Field Studies (1964, pps. 32-36) revealed that the median age and the age distribution of professional staffs in high and low socio-economic area schools differed at the elementary and junior high level but not at the senior high school level. Differences were in the expected direction, with low socio-economic area schools having younger median ages and smaller percentages of staff between the ages of 36-60.[1] Since our findings (Table 4) confirm those of the Bureau we shall not belabor the point. Differences which do occur between the Bureau's results and those of the present study may be explained by sampling variation (1958 vs. 1963 staffs; teachers vs. all professional personnel; Target vs. "low-income," etc.)

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[1] The percentage of staff between the ages of 36-60 is another item which, in combination with other factors, is related to school quality. Presumably this figure represents "prime" teaching years, i.e. when the staff has some experience, has passed the family formation years, and has not yet been beset with problems of age and retirement. Obviously these factors influence individuals differently but research has indicated that the measure has some validity for a staff or a school system.

Table 4

Median Age of Teaching Staffs for Target and Comparison Elementary Schools and Per Cent of Teachers between the Ages of 36-60 for the School Year 1958-59

School Level	Target			Comparison		
	N	Median age	% of teachers 36-60	N	Median age	% of teachers 36-60
Elementary	86 (220)	44 (40)	44 (45)	109 (213)	50 (50)	46 (70)
Junior High	94 (143)	34 (37)	33 (44)	95 (145)	42 (43)	48 (55)
Senior High	172 (322)	44 (42)	53 (57)	112 (204)	45 (42)	62 (56)
All Levels	352	42	45	316	46	52

Note: Figures in parentheses describe total professional staffs of a sample of low socio-economic area schools and high socio-economic area schools for the 1963-64 school year (Bureau of Field Studies and Surveys, 1964).

These data are valuable for one reason. They indicate that the age distribution of teachers in high and low income area schools in 1963-64 was similar to the age distribution of an independently collected sample of high and low income schools taken some five or six years earlier.

These findings do not, however, give direct support to the belief that young teachers are typically assigned to lower income area schools since the findings merely describe the composition of the staff for a given year without investigating how the staff came to have that composition. Tables 5 and 6 show the cumulative per cent, by age, of all teachers newly assigned to Target and Comparison schools for each year 1958-59 through 1962-63. Only those teachers age 35 and under are included in the tables although they represent the percentage of *all* new additions. For example, Table 5, relating to elementary school teachers, shows that in 1958-59 sixty per cent of all teachers new to Target schools and seventy-six per cent of all teachers new to Comparison schools were age 35 and under. Table 6 gives results for junior high schools. Figures for individual years are highly unstable due to small sample sizes. The total column contains fairly substantial numbers and reveals statistically significant differences in the distributions at the elementary level but not at the junior high level.

The greatest difference between Target and Comparison *elementary* schools was at the age 25 and under level. More than one out of three (34%) new Target teachers were aged 25 and under but only one in five (20%) Comparison teachers was in this age group. This difference is statistically significant at the .05 level by chi-square. A look at the figures for individual years shows that, without exception, Target schools received a higher percentage of their new teachers from this very young group.

At the *junior high* level the largest differences between Target and Comparison samples was not at the very youngest ages, but from approximately 27 to 33. However, the two distributions did not differ significantly.

New teachers in the junior high schools, Target and Comparison alike, are much younger than new teachers in Target and Comparison elementary schools. At the elementary level approximately half the new teachers were age 30 and under, and slightly less than two-thirds were age 35 and under. By contrast, two-thirds of all new junior high school teachers were 30 and under while more than eight out of ten were 35 and under.

It should be emphasized that the term "new" refers to teachers new to a specific school. Thus, experienced teachers who transferred from one school to another, or from another school system, were included in the data just presented. A more complete discussion of beginning (i.e. inexperienced) teachers is given in the sections on experience and manner of accession.

Table 5

Cumulative Per Cent Distribution of Teachers' Ages for Teachers New to Target (T) and Comparison (C) Elementary Schools during the Years 1958-59 through 1962-63

Age	1958-59		1959-60		1960-61		1961-62		1962-63		All years 1958-59 - 1962-63	
	T	C	T	C	T	C	T	C	T	C	T	C
35 and under	60%	76%	74%	57%	54%	75%	74%	71%	68%	39%	65%	63%
34 " "	53	76	68	57	54	67	74	71	68	39	63	62
33 " "	50	71	68	52	51	58	74	71	68	33	62	58
32 " "	50	65	68	48	51	50	74	71	68	28	62	53
31 " "	40	53	63	43	49	50	74	67	66	28	58	49
30 " "	37	53	63	43	35	50	67	67	56	28	50	49
29 " "	33	41	63	43	32	42	67	67	54	28	48	46
28 " "	27	41	63	43	27	33	63	63	51	28	44	42
27 " "	27	29	63	38	27	33	63	42	49	28	44	35
26 " "	23	29	53	29	24	33	63	38	49	28	41	32
25 " "	20	18	47	19	19	8	48	29	41	17	34	20
24 " "	10	12	37	14	8	0	33	29	34	17	23	16
23 " "	10	6	26	0	5	0	7	4	27	6	15	3
22 " "	3	0	10	0	0	0	4	0	2	6	3	1
Median Age	32	30	26	33	32	30	26	28	28	36	30	32
Number of New Teachers: All Ages	30	17	19	21	37	12	27	24	41	18	154	92

Table 6

Cumulative Per Cent Distribution of Teachers' Ages for Teachers New to Target (T) and Comparison (C) Junior High Schools during the Years 1958-59 through 1962-63

Age	1958-59		1959-60		1960-61		1961-62		1962-63		All years 1958-59 - 1962-63	
	T	C	T	C	T	C	T	C	T	C	T	C
35 and under			83%	100%	93%	84%	80%	65%	87%	77%	86%	81%
34 " "	NOT AVAILABLE		83	100	90	84	76	65	87	69	82	79
33 " "			83	79	90	84	72	65	87	62	82	73
32 " "			79	79	86	84	68	59	74	54	77	70
31 " "			79	71	86	84	60	47	74	54	75	65
30 " "			66	64	86	84	56	41	71	54	70	62
29 " "			62	64	83	79	52	41	68	46	67	59
28 " "			48	57	79	58	40	41	61	46	58	51
27 " "			41	50	72	58	32	29	58	46	52	46
26 " "			31	50	66	53	24	18	48	46	43	41
25 " "			28	43	45	37	16	12	29	31	30	30
24 " "			14	36	17	21	12	12	19	23	16	22
23 " "			3	14	10	5	4	6	13	8	8	8
22 " "			0	0	0	0	0	0	0	0	0	0
Median Age			29	26	26	26	29	32	27	30	27	28
Number of New Teachers: All Ages			29	14	29	19	25	17	31	13	114	63

Table 7 shows the age distribution of all teachers returning in 1958-59 plus all new teachers added to the school staff for the years 1958-59 through 1962-63. The table gives a picture of the basic staff (i.e., teachers who had taught in the school at least one previous year) plus all additions. High turnover serves to lower the age level by requiring more additions; typically younger teachers. The value of this table is that it gives a picture of the total experience of the schools over a five year period by describing age characteristics of all teachers who taught in those schools during that time.

Table 7 reveals the same general picture seen before. Differences occurred at elementary and junior high levels while senior high age distributions of Target and Comparison teachers were essentially mirror images. At the elementary level the major difference remains between teachers age 25 and under. Twice as many Target teachers as Comparison teachers were under 26. Approximately 10% of Target elementary teachers and 15% of Comparison elementary teachers were over age 60. Seven out of ten Target junior high teachers who taught between 1958 and 1962 were age 35 or under. By contrast, five out of ten Comparison junior high teachers were age 35 and under. This large difference could not be accounted for by the teachers new to the schools over the five years studied. Substantial age differences must have existed in the basic staff returning to the schools in 1958-59. Comparison junior high staffs had a slightly higher percentage of teachers over 60 (13% to 8%).

An analysis of individual schools (Table 8) shows the extreme differences at the junior high level. Target junior high schools F and G had only 14% to 15% of their teaching staff between the ages of 36-60 from 1958-59 through 1962-63. (Ages were recorded as of the 1962-63 school year, or at the time the teacher left the school.)

At the elementary level, percentages for this quality-related indicator ranged from 29% to 44% in Target schools and from 33% to 62% in Comparison schools.

Table 7

Cumulative Per Cent of Target and Comparison School Teachers by Age, 1958-59 through 1962-63

Age[a]	Target teachers			Comparison teachers		
	Elementary	Junior High	Senior High	Elementary	Junior High	Senior High
69 and Under	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
65 " "	94.8	97.1	96.4	92.9	95.5	95.8
60 " "	90.5	91.8	84.0	85.3	87.3	86.8
50 " "	77.1	83.6	67.2	65.0	73.2	66.5
40 " "	63.8	76.3	53.6	55.7	63.1	48.5
35 " "	53.3	70.0	40.4	43.7	50.3	37.7
30 " "	40.5	51.2	26.8	31.7	33.1	26.4
29 " "	39.0	47.3	23.2	29.5	30.6	24.0
28 " "	36.2	41.5	20.8	27.9	27.4	19.8
27 " "	33.3	36.2	18.0	22.9	24.2	16.8
26 " "	31.4	29.5	14.0	20.2	19.8	12.6
25 " "	25.7	21.3	11.2	13.1	14.0	11.4
24 " "	18.1	11.6	7.6	9.8	10.2	7.2
23 " "	10.9	5.3	3.2	2.2	3.2	3.0
22 " "	2.4	.0	.8	1.1	.0	1.2
N	210[b]	207	249	183	157	167

[a] Age is as of 1962-63 school year. Age, for teachers who left the school before that year, is as of year of separation.

[b] Includes 15 teachers from a sixth Target Area elementary school not included in the study of teacher retention.

Kolmogorov-Smirnov

	Target vs. Comparison	p
Elementary	D = .126	.10
Junior High	D = .197	.01
Senior High	D = .051	n.s.

Table 8

Median Age of Teaching Staffs for Individual Target and Comparison Schools and Per Cent of Staffs between the Ages of 36-60 for the Years 1958-59 through 1962-63

Target				Comparison			
School	N	Median age	% of teachers 36-60	School	N	Median age	% of teachers 36-60
A	31	35	29	Q	24	47	38
B	48	36	44	R	29	50	45
C	35	37	43	S	21	40	62
D	43	27	28	T	39	33	33
E	38	31	37	U	28	37	39
				V	42	32	36
Elem. Total	195	33	37	Elem. Total	183	38	42
F	50	30	14	W	70	33	41
G	85	29	15	X	87	39	33
H	72	33	35				
Jr. H. Total	207	30	22	Jr. H. Total	157	35	37
I	65	36	34	Y	77	38	49
J	97	41	46	Z	90	42	49
K	87	40	48				
Sr. H. Total	249	39	44	Sr. H. Total	167	41	49
All Target Schools	666[a]	34	35	All Comparison Schools	507	38	43

[a] Includes 15 teachers from a sixth Target Area elementary school not included in the study of teacher retention.

Characteristics of Target and Comparison School Teaching Staffs:

PREVIOUS TEACHING EXPERIENCE

Closely related to age is the factor of teaching experience. In general, results for experience paralleled findings for age; substantial differences between Target and Comparison schools at the elementary and junior high level and little or no difference at the senior high school level.

Overall, Target teachers were significantly less experienced than Comparison teachers. On the average, Target teachers had two years less experience at the time they came to their school than did Comparison teachers (means were 8.1 years for Target and 10.1 years for Comparison; experience obtained outside the Minneapolis system was also included). Approximately four out of ten Target teachers (38%) had no previous experience. By contrast, only one of four Comparison teachers (25%) was without experience at the time they entered their school.

At the elementary school level over half of all teachers contracted in Target schools from 1958 through 1962 were without previous teaching experience. Approximately one-fourth of Comparison teachers had no prior experience. On the average, Target elementary school teachers had from five to six years experience while Comparison teachers had approximately nine years experience. Junior high staffs exhibited similar differences with Target teachers averaging five to six years previous experience and Comparison teachers averaging nine years.

Senior high school teachers in both samples had considerably more teaching experience than elementary or junior high teachers. Target and Comparison teachers averaged over twelve and one-half years experience. The difference between the two samples was not significant and the distributions of experience for the two samples were also quite similar. See Table 9.

Results similar to these were cited by the Bureau of Field Studies (1964, pps. 36-38). Median differences of five and six years at elementary and

Table 9

Previous Teaching Experience of Returning and New Target and Comparison School Teachers, by School Level, for 1958-59 to 1962-63

(Per Cent)

Previous Teaching Experience	Target	Comparison	Total
Elementary			
0 years	52.4%	26.0%	40.2%
1 year	6.1	9.4	7.6
2-5 years	18.9	26.5	22.4
6 or more years	22.6	38.1	29.8
Total %	100.0	100.0	100.0
Total N	212	181	393
Mean years	5.6	8.9	7.1
Junior High			
0 years	44.6%	31.0%	38.8%
1 year	10.9	11.6	11.2
2-5 years	22.8	19.4	21.3
6 or more years	21.8	38.1	28.7
Total %	100.1	100.1	100.0
Total N	211	155	366
Mean years	5.7	8.9	7.1
Senior High			
0 years	18.5%	17.2%	17.9%
1 year	6.0	5.3	5.7
2-5 years	21.0	16.0	18.9
6 or more years	54.5	61.5	57.5
Total %	100.0	100.0	100.0
Total N	233	169	402
Mean years	12.6	12.7	12.6
All Levels			
0 years	37.8%	24.6%	32.0%
1 year	7.6	8.7	8.1
2-5 years	20.9	20.8	20.8
6 or more years	33.7	45.9	39.0
Total %	100.0	100.0	99.9
Total N	656	505	1,161
Mean years	8.1	10.1	9.0

Target vs. Comparison

	t	p
Elementary	2.79	.01
Junior High	2.57	.02
Senior High	.08	n.s.
All Levels	2.78	.01

junior high levels, respectively, were reported for the 1963-64 professional staffs of high and low income schools. No difference was noted at the high school level.

Since Table 9 includes all teachers who taught over the five year period, (i.e., the "basic" staff of returning teachers who had taught at least one previous year in the same school plus all new teachers) the data are heavily influenced by turnover. Most new teachers are recruited directly from college, and schools with high turnover would tend to have many inexperienced teachers on the staff over the course of five years. Consequently, the total 1958-1962 staff would appear less experienced than would a staff for any one year.

To get a picture of the previous experience of new teachers, without the influence of turnover, the experience of new teachers only was investigated. Table 10 shows previous experience for new elementary school teachers. Table 11 presents the junior high school picture.

Seven out of ten elementary teachers new to Target schools from 1958-59 to 1962-63 had no prior teaching experience. Approximately five out of ten new Comparison elementary teachers had no prior experience. The difference was statistically very significant. A higher percentage of new Target teachers were without teaching experience in each year, except 1958-59, when measured against new Comparison teachers.

New junior high Target and Comparison teachers tended to have similar amounts of prior experience. Although 73% of new Target junior high teachers had no previous teaching experience compared with 62% of new Comparison teachers the difference was not statistically significant. The distribution of new teachers for each of the five years revealed no consistent pattern. It will be remembered, however, that the average length of previous experience differed substantially for Target and Comparison junior high staffs. Apparently this mean difference resulted from a combination of a higher percentage of more experienced teachers on the returning 1958-59 staff (65% of

Table 10

Distribution (Per Cent) of Previous Teaching Experience (Years) of Returning and New Teachers in Target (T) and Comparison (C) Elementary Schools, 1958-59 to 1962-63

Years of Previous Experience	Returning teachers 1958-59		Per cent of new teachers in:										All new teachers	
			1958-59		1959-60		1960-61		1961-62		1962-63		1958-59 - 1962-63	
	T	C	T	C	T	C	T	C	T	C	T	C	T	C
0	0%	0%	43%	47%	85%	55%	63%	55%	85%	58%	83%	44%	71%	52%
1	5	13	13	0	5	0	11	17	0	8	2	6	6	6
2-5	41	31	20	18	5	15	13	28	0	26	12	28	11	22
6 or more	54	56	24	35	5	30	13	0	15	8	3	22	12	20
Total %	100	100	100	100	100	100	100	100	100	100	100	100	100	100
N	56	91	30	17	20	20	38	11	27	24	41	18	156	90

Target vs. Comparison All New Teachers	Chi-square	d.f.	p
0 vs. 1 or more years	7.96	1	.01

Table 11

Distribution (Per Cent) of Previous Teaching Experience (Years) of Returning and New Teachers in Target (T) and Comparison (C) Junior High Schools, 1958-59 to 1962-63

Years of Previous Experience	Returning teachers 1958-59		Per cent of new teachers in:										All new teachers 1958-59 - 1962-63	
			1958-59		1959-60		1960-61		1961-62		1962-63			
	T	C	T	C	T	C	T	C	T	C	T	C	T	C
0	0%	0%	79%	19%	60%	79%	76%	76%	72%	76%	83%	62%	73%	62%
1	11	9	5	19	23	7	7	12	8	6	0	31	9	14
2-5	41	26	16	31	3	7	10	12	12	6	10	8	10	13
6 or more	48	65	0	31	13	7	7	0	8	12	7	0	8	10
Total %	100	100	100	100	99	100	100	100	100	100	100	101	100	99
N	73	78	19	16	30	14	29	17	25	17	29	13	132	77

Target vs. Comparison All New Teachers	Chi-square	d.f.	p
0 vs. 1 or more years	.28	1	n.s.

returning Comparison teachers had 6 or more years experience compared with 48% of returning Target teachers) and the nonsignificant difference in experience of new teachers which also favored the Comparison sample.

Previous Teaching Experience of Individual Target and Comparison School Staffs

Target elementary and junior high school staffs, with few exceptions, had higher percentages of teachers with no prior experience. See Table 12. From 29% to 72% of teachers in Target elementary schools were without experience. Comparison elementary school staffs ranged from 10% to 46% without experience.

Target junior high schools F and G had a smaller percentage of experienced teachers than did Target school H or Comparison schools W and X. A similar relationship among these five schools was observed for age. See Table 8.

Table 12

Previous Teaching Experience of Teaching Staffs in Individual Target and Comparison Schools, 1958-59 - 1962-63

(Per Cent)

Target					Comparison				
School	N	Per cent of teachers having taught:			School	N	Per cent of teachers having taught:		
		0 years	1 year	2 or more years			0 years	1 year	2 or more years
A	31	29%	13%	58%	Q	24	17%	12%	71%
B	48	46	2	52	R	29	14	6	80
C	38	53	8	39	S	20	10	15	75
D	43	72	5	23	T	39	46	8	46
E	38	53	5	42	U	28	25	14	61
					V	41	29	5	66
Elem. Total	212[a]	52	6	42	Elem. Total	181	26	9	65
F	48	58	8	33	W	67	33	15	52
G	87	52	12	36	X	88	30	9	61
H	76	28	10	62					
Jr.H. Total	211	45	10	45	Jr.H. Total	155	31	12	57
I	57	21	7	72	Y	77	22	4	74
J	88	10	3	87	Z	92	13	7	80
K	87	25	9	66					
Sr.H. Total	232	18	6	76	Sr.H. Total	169	17	5	78
All Target Schools	655[a]	38	8	54	All Comparison Schools	505	25	9	66

[a] Includes 15 teachers from a sixth Target Area elementary school not included in the study of teacher retention.

Characteristics of Target and Comparison School Teaching Staffs: MARITAL STATUS

Approximately two out of three teachers (65%) in all sampled schools were married. Very little variation from this proportion was observed across school levels or between Target and Comparison samples. Sixty-four per cent of all Target teachers and sixty-seven per cent of all Comparison teachers were married. (Separated and divorced teachers were included in the "married" category.) At the various school levels the percentage of married teachers was 63%, 65%, and 66% for elementary, junior high, and senior high, respectively.

Target and Comparison staffs had similar marital characteristics at each school level. The percentage of married Target teachers was 61%, 64%, and 65% for elementary, junior high, and senior high, respectively. Comparable figures for Comparison teachers were 65%, 68%, and 68%. Although a slightly higher percentage of married teachers was evident on Comparison staffs at all levels, none of the differences appeared to have either statistical or practical significance. See Table 13.

Marital Status of Individual Target and Comparison School Staffs

An analysis of marital status in individual schools revealed considerable "mix" between Target and Comparison schools, i.e. some Target schools had more married teachers than some Comparison schools while some Comparison schools had more married teachers than some Target schools. This occurred at all school levels. The per cent of married teachers in Target elementary schools ranged from 43% to 76%. The range in Comparison elementary schools was 57% to 79%. Only one school in the entire sample of 21 schools had a minority of married teachers on its staff. Target elementary school D had 43% married teachers and 57% single teachers.

Junior high school F, a Target school, had 51% married teachers. All other junior high schools, in both samples, had at least 61% of its staff married. The various senior high school staffs exhibited a very narrow range in the

Table 13

Marital Status of Returning and New Target and Comparison School Teachers, by School Level, for 1958-59 to 1962-63

Marital Status by School Level[a]	Target		Comparison		Total	
	N	%	N	%	N	%
Elementary						
Married	138	61.1	121	65.0	259	62.9
Single	88	38.9	65	35.0	153	37.1
Total	226	100.0	186	100.0	412	100.0
Junior High						
Married	141	63.8	110	67.5	251	65.4
Single	80	36.2	53	32.5	133	34.6
Total	221	100.0	163	100.0	384	100.0
Senior High						
Married	166	65.3	120	67.8	286	66.4
Single	88	34.7	57	32.2	145	33.6
Total	254	100.0	177	100.0	431	100.0
All Levels						
Married	445	63.5	351	66.7	796	64.9
Single	256	36.5	175	33.3	431	35.1
Total	701	100.0	526	100.0	1,227	100.0

[a] Marital status recorded as of 1962-63 school year. Widowed, divorced and separated teachers considered as married.

Target vs. Comparison	Chi-square	d.f.	p
Elementary	.53	1	n.s.
Junior High	.41	1	n.s.
Senior High	.18	1	n.s.
All Levels	1.25	1	n.s.

distribution of married teachers. The percentage of married teachers on the staffs of the five schools ranged from 63% to 69%. Details for individual schools are not reproduced.

Trends in the Acquisition of Married or Single Teachers

The distributions of marital status for elementary teachers returning to Target or Comparison schools in 1958-59 were identical. In each sample, 59% of returning teachers were married; 41% were single. Over the next five years a slightly higher percentage of married teachers was added to Comparison staffs. Seventy-one per cent of new Comparison teachers were married compared with 61% of new Target teachers. This difference approached statistical significance (p = .10-.20). The three most recent years. 1960-61, 1961-62, 1962-63, contributed most to this difference. New acquisitions were essentially similar in 1958-59 and 1959-60. Table 14 illustrates these findings.

Little difference was observed in the distribution of marital status of returning and new Target and Comparison teachers at the junior high level. Seventy per cent of returning Target teachers and sixty-five per cent of returning Comparison teachers were married. The proportion of married teachers among new acquisitions was essentially the same for both samples over the five year period, 1958-1962. Fifty-eight per cent of new Target teachers and 59% of new Comparison teachers were married. No trend over the years was observed. Details were not reproduced because of the similarity between the two samples.

Table 14

Distribution (Per Cent) of Marital Status of Returning and New Teachers in Target (T) and Comparison (C) Elementary Schools, by Year, 1958-59 to 1962-63

Marital Status[a]	Returning teachers 1958-59		Teachers joining staff in:										All new teachers 1958-59 - 1962-63	
			1958-59		1959-60		1960-61		1961-62		1962-63			
	T	C	T	C	T	C	T	C	T	C	T	C	T	C
% Married	59%	59%	81%	78%	43%	45%	63%	75%	45%	68%	67%	94%	61%	71%
% Single	41	41	19	22	57	55	37	25	55	32	33	6	39	29
Total %	100	100	100	100	100	100	100	100	100	100	100	100	100	100
N	59	91	31	18	23	22	41	12	29	25	43	18	167	95

[a] Marital status recorded as of 1962-63 school year. Widowed, divorced, and separated teachers considered as married.

Target vs. Comparison	Chi-square	d.f.	p
All New Teachers, Married vs. Single	1.71	1	.10-.20

Characteristics of Target and Comparison School Teaching Staffs: EDUCATION

Target school teachers in Minneapolis tended to be better educated than teachers in the middle income Comparison schools. Nine per cent of Comparison teachers did not hold a bachelor's degree. Only five per cent of Target teachers were without a degree. The difference is small but statistically significant ($p = < .01$).

Teachers were classified as to whether they held a bachelor's degree, an advanced degree, or less than a bachelor's degree. Teachers without a bachelor's degree typically held a two-year Associate of Arts Degree (A.A.)[1]. Since most teachers holding the A.A. Degree were older, more experienced, teachers it seems probable that their higher concentration in middle income schools represents the cumulative effect of transfers away from the downtown Target schools over the years. (Further information on this point is provided in the section on Manner of Accession.)

Although a difference was observed in the educational background of total Target and Comparison staffs, no significant difference was found between the two samples at the elementary, junior high, or senior high school levels. The overall difference is thus the result of an accumulative effect of small differences, - all in the same direction, - and the increased sample size. Only at the elementary school level did the difference approach an acceptable level of significance ($p = .10-.20$). Nineteen per cent of Comparison elementary teachers and 13% of Target elementary teachers were without four year degrees. See Table 15.

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[1] Most A.A. degrees were awarded by normal schools in Minnesota. According to a spokesman for the Minnesota State Department of Education the awarding of the A.A. was discontinued in the 1950's.

Table 15

Education of Returning and New Target and Comparison School Teachers, by School Level, for 1958-59 to 1962-63

(Per Cent)

Education by Level	Target	Comparison	Total
Elementary			
Bachelor's Degree	80.9%	71.4%	76.5%
Advanced Degree	6.2	9.3	7.7
Less than a Bachelor's Degree	12.9	19.2	15.9
Total %	100.0	99.9	100.1
Total N	209[a]	182	391
Junior High			
Bachelor's Degree	73.6%	71.3%	72.6%
Advanced Degree	23.1	22.9	23.0
Less than a Bachelor's Degree	3.4	5.7	4.4
Total %	100.1	99.9	100.0
Total N	208	157	365
Senior High			
Bachelor's Degree	71.6%	75.5%	73.1%
Advanced Degree	27.6	22.2	25.4
Less than a Bachelor's Degree	.8	2.4	1.5
Total %	100.0	100.1	100.0
Total N	249	167	416
All Levels			
Bachelor's Degree	75.1%	72.7%	74.1%
Advanced Degree	19.5	18.0	18.8
Less than a Bachelor's Degree	5.4	9.4	7.2
Total %	100.0	100.1	100.1
Total	666[a]	506	1,172

[a] Includes 15 teachers from a sixth Target Area elementary school not included in the study of teacher retention.

Target vs. Comparison

Less than a Bachelor's Degree vs. Bachelor's plus Advanced Degree	Chi-square	d.f.	p
Elementary	2.45	1	n.s.
Junior High	.69	1	n.s.
Senior High	.84	1	n.s.
All Levels	6.63	1	<.01

Very few teachers without four year degrees were teaching at the secondary school level. Six high school teachers and 16 junior high teachers did not hold a bachelor's degree. By contrast, 62 elementary teachers in the two samples did not hold a bachelor's degree.

Teachers with advanced degrees (all at the master's level; no Ph. D.'s were in the sample) also were concentrated at the secondary level. Approximately one teacher in four in Target and Comparison secondary schools held a masters's degree. At the elementary level, one Target teacher in sixteen and one Comparison teacher in eleven held master's degrees. This difference was not statistically significant ($p = .25-.50$).

Distribution of education of Comparison and Target teaching staffs was generally consistent with distributions of education of total professional staffs in high and low socio-economic area schools described by the Bureau of Field Studies for the 1963-64 school year (1964, pps, 36-38).[1] The Bureau's study showed a higher percentage of advanced degrees at all levels when compared with the present study. This difference probably reflects the inclusion of administrators in their figures. At the high school level 41% of the professional staff in high socio-economic schools and 34% of the professional staff in low socio-economic schools held advanced degrees according to the Bureau. By contrast, low income Target high school teaching staffs showed a higher percentage of advanced degree teachers when matched against middle income Comparison teaching staffs (28% to 22%). This contradiction may be simply a reflection of sampling variation, but the possibility also exists that there was a much higher proportion of non-teaching personnel (i.e. administrators) with advanced degrees concentrated in the higher income schools.

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[1] The Bureau described professional staffs by Degree Classification. Class I is equivalent to less than a bachelor's degree. Classes II and III are equivalent to a bachelor's degree, or a bachelor's degree plus some graduate credit. Class IV is equivalent to a master's degree. Class V is equivalent to a master's degree plus some additional credit. Class VI, involving primarily administrators and non-teaching personnel, is equivalent to a doctor's degree.

Trends in the Educational Level of New Target and Comparison School Teachers

Table 16 shows that in 1958-59 approximately one-third of all returning elementary teachers were without four year degrees. Over the next five years only 5% to 9% of new teachers were without a four year degree. These new teachers were probably transfers. Thus the total staff of returning and new teachers was composed of 15.9% teachers without degrees and 83.1% teachers with bachelor or advanced degrees. (The Bureau of Field Studies reported 15.7% of the total professional elementary staff in 1963-64 as being without a bachelor's degree, Class I.) The evidence indicates that many of the teachers without four year degrees are leaving the system or possibly returning to college to obtain a degree. Since most of these teachers are older it is probable that many of them are reaching retirement age and that the teacher without a bachelor's degree is rapidly becoming a thing of the past.

This trend is dramatically illustrated at the secondary level. In 1958-59 twenty-two of the returning teachers in Target and Comparison junior and senior high schools were without four year degrees. By 1963-64 there were only six non-degree teachers in the entire school system at the secondary level! (Bureau of Field Studies and Surveys, 1964, p. 7.)

None of the teachers new to Target and Comparison junior high schools from 1958-59 to 1962-63 were without four year degrees. Approximately 85% held bachelor's degrees and 15% held advanced degrees. Since the experience was quite similar in both samples, details will not be presented.

Some minor variation was observed at the elementary level. More of the new Target teachers held bachelor's degrees while more of the new Comparison teachers were without a four year degree, or held advanced degrees. This trend is a reversal of the distribution of the returning 1958-59 staff in which more Target teachers were without four year degrees, or held advanced degrees, while relatively more Comparison teachers held bachelor's degrees. Differences in the distribution of returning teachers were not significant (Chi-square = 1.45, d.f. = 2, p = .30-.50).

Table 16

Distribution (Per Cent) of Education of Returning and New Teachers in Target (T) and Comparison (C) Elementary Schools, by Year, 1958-59 to 1962-63

Education	Returning teachers 1958-59		Teachers joining staff in:										All new teachers 1958-59 - 1962-63	
			1958-59		1959-60		1960-61		1961-62		1962-63			
	T	C	T	C	T	C	T	C	T	C	T	C	T	C
Bachelor's Degree	49%	59%	83%	94%	94%	70%	95%	83%	93%	92%	95%	78%	92%	84%
Advanced Degree	15	11	4	0	6	15	0	8	3	4	5	11	3	8
Less than a Bachelor's Degree	36	30	13	6	0	15	5	8	3	4	0	11	5	9
Total %	100	100	100	100	100	100	100	99	99	100	100	100	100	101
N	55	91	30	17	18	20	37	12	27	24	42	18	154	91

Target vs. Comparison	Chi-square	d.f.	p
All New Teachers 1958-59 - 1962-63	4.47	2	.10-.20
Returning Teachers 1958-59	1.45	2	n.s.

Educational Level of Staffs in Individual Target and Comparison Schools

Results for individual schools reflected the general picture. At the elementary level the percentage of Target teachers without four year degrees ranged from 6% to 19%. Comparison elementary staffs ranged from 12% to 29%. Considerable overlap existed between the two samples.

Junior high staffs without four year degrees ranged from 2% to 8% in both samples, while senior high school staffs without four year degrees ranged from 0% to 4%.

Details are not presented for individual schools.

Characteristics of Target and Comparison School Teaching Staffs:
MANNER OF ACCESSION

Teachers were classified according to the manner of accession into Target and Comparison schools. Three basic categories were established: Entering, Re-entering, and Transferring. Entering teachers had never taught before. Re-entering teachers had prior teaching experience, but had not taught the year prior to their accession into one of the sampled schools. Transferring teachers had taught the previous year in a school other than the Target or Comparison school at which they were teaching when the sample was drawn. In addition, a small group of teachers was assigned to a miscellaneous, or "other" category. Included in this group were teachers for whom information was not available and a number of school personnel who were assuming teaching positions after having served in some other capacity, e.g. central office staff.

Considering new teachers only (using this study's operational definition of "new") it was found that approximately six out of ten teachers were entries, two were transfers, and two were re-entries over the 1958-59 - 1962-63 period. Figures varied greatly between samples and across school levels, however.

Sixty-one per cent of all new Target teachers were Entering teachers. Less than half of the new Comparison teachers (49%) were Entering teachers. Almost twice as many Comparison teachers transferred into their schools as did Target teachers (28% to 16%). The percentage of Re-entering teachers was the same for both samples (24%).

Accession experience of elementary and junior high schools differed from that of the high schools. High schools acquired a smaller proportion of their staffs by hiring teachers without previous experience. Less than half of all high school accessions were Entering teachers (46%). Transfers accounted for 25% of accessions and Re-entries accounted for 29%. Elementary and junior high staffs were very close to the 6-2-2 distribution; six Entries, two Transfers, and two Re-entries out of each ten accessions.

A comparison of accessions by Target and Comparison schools at each level revealed significant differences between the two samples at the elementary and junior high levels but none at the high school level. Differences in the junior high samples were particularly acute. One out of three Comparison teachers were acquired by Transfer, but only one of ten Target junior high accessions was acquired in this manner. Approximately seven out of ten Target school accessions were inexperienced Entering teachers. In Comparison schools about five in ten teachers were Entering teachers.

Similar relationships were observed at the elementary level. Only in the high schools did Target staffs have a higher proportion of incoming Transfers. The difference between the two samples was negligible, however. For all practical purposes, Target and Comparison high schools had basically the same experience in obtaining new teachers. See Table 17.

Table 17

Manner of Accession of Teachers New to Target and Comparison Schools, by Level, 1958-59 to 1962-63

(Per Cent)

Type of Accession by Level	Target	Comparison	Total
Elementary			
Entering	66.9%	51.1%	60.9%
Re-entering	19.2	21.7	20.2
Transferring	13.9	27.2	18.9
Total %	100.0	100.0	100.0
Total N	151	92	243
Junior High			
Entering	63.0%	51.4%	58.9%
Re-entering	28.2	15.3	23.7
Transferring	8.9	33.3	17.4
Total %	100.1	100.0	100.0
Total N	135	72	207
Senior High			
Entering	47.9%	42.7%	45.7%
Re-entering	25.0	35.3	29.3
Transferring	27.1	22.1	25.0
Total %	100.0	100.1	100.0
Total N	96	68	164
All Levels			
Entering	60.7%	48.7%	56.2%
Re-entering	23.8	23.7	23.8
Transferring	15.5	27.6	20.0
Total %	100.0	100.0	100.0
Total N	382[a]	232	614

[a] Includes 8 Entering teachers and 7 Transferring teachers from a sixth Target Area school not included in the study of teacher retention.

Target vs. Comparison	Chi-square	d.f.	p
Elementary	5.96	2	.05
Junior High	20.34	2	.001
Senior High	2.07	2	n.s.
All Levels	14.33	2	.001

Entering: No prior teaching experience

Re-entering: Prior teaching experience, but did not teach the previous year

Transferring: Taught at a different school the previous year

Accessions by Individual Target and Comparison Schools

The total teacher acquisition experience of each individual school is shown in Table 18. Returning teachers as well as accessions are shown. Thus, the table gives a picture of the total teaching staff experience for the years 1958-59 to 1962-63. For example, 27% of all teachers who taught in school A between 1958-1962 were on the staff of school A in 1957-58 (Returning teachers). An additional 27% was obtained by hiring inexperienced teachers (Entries). Thirty per cent of all teachers in school A between 1958-62 had prior teaching experience but had not taught the year before they came to school A (Re-entries). Finally, 12% had taught at a different school the previous year (Transfers) and information was not available for three per cent of school A's teachers (Other).

Information on individual schools is highly consistent with total results. Very little overlap occurred between Target and Comparison elementary and junior high schools. A comparison of elementary schools is particularly revealing. In all Comparison schools, except one, the modal source of teachers was Returning teachers. Returning teachers supplied approximately one-half of all Comparison teachers and Entering teachers provided roughly one-fourth of the total 1958-62 Comparison staff. In Target schools the relationship was reversed. Entering teachers were the mode in all schools except one. Entering teachers made up somewhat less than half the total Target elementary staff (44%) while Returning teachers provided less than one-third (29%) of the staff.

Transfers also differed greatly in their impact on the school staffs. Transfers accounted for more than ten per cent of the staff in only one of the five Target elementary schools. In Comparison schools Transfers accounted for ten per cent or more of the total staff in all schools except one. The range for Target schools was 3% to 12%; for Comparison schools, 5% to 21%.

Table 18

Manner of Accession of All Teachers in Individual Target and Comparison Schools, 1958-59 to 1962-63

(Per Cent)

Target								Comparison							
		Per cent of teachers:								Per cent of teachers:					
School	N	Re-turning	En-tering	Re-en-tering	Trans-ferring	Other[a]	Total	School	N	Re-turning	En-tering	Re-en-tering	Trans-ferring	Other[a]	Total
A	33	27	27	30	12	3	99	Q	24	58	17	8	17	0	100
B	50	30	42	20	8	0	100	R	29	72	14	3	10	0	99
C	38	34	47	11	3	5	100	S	21	62	10	5	19	5	101
D	50	16	52	6	6	20	100	T	40	33	45	15	5	3	101
E	38	37	50	5	5	3	100	U	29	52	24	14	10	0	100
								V	42	36	29	14	21	0	100
Elem. Total	209	29	44	14	7	7	101	Elem. Total	185	49	25	11	14	1	100
F	51	31	49	6	8	6	100	W	74	38	27	9	20	5	99
G	96	32	44	15	2	7	100	X	90	56	19	4	10	11	100
H	78	35	23	27	8	8	101								
Jr.H. Total	225	33	38	17	5	7	100	Jr.H. Total	164	48	23	6	15	9	101
I	58	64	19	7	10	0	100	Y	88	59	19	11	2	8	99
J	103	60	14	9	14	4	101	Z	93	57	13	15	14	1	100
K	89	56	24	11	7	2	100								
Sr.H. Total	250	60	18	9	10	2	99	Sr.H. Total	181	58	16	13	9	4	100
All Target Schools	684	41	33	13	8	5	100	All Comparison Schools	530	52	21	10	12	5	100

[a] Includes transfers from Central Office and information not available.

Trends in the Manner of Accession of Target and Comparison Teaching Staffs

A year by year analysis of accession experience of elementary and junior high staffs showed fairly consistent experience but no indication of change or trend. Target junior high staffs had a lower percentage of accessions by Transfer than did Comparison staffs in each of the five years studied. In the elementary schools, Target staffs had fewer transfers in each year except in 1960-61.

Characteristics of Target and Comparison School Teaching Staffs: SUMMARY

In this section two samples of schools, within the same public school system, were studied. Target schools were defined as having a high percentage of pupils from broken homes, from low income families, from non-white families and as having high delinquency rates. A group of Comparison schools had children from families with above average incomes. These children had low delinquency rates. Very few were non-white and few came from broken homes.

Comparisons were made of all teachers who taught in these two groups of schools at any time between 1958-59 and 1962-63.

In general, findings reflected substantial differences between Target and Comparison teaching staffs at the elementary and junior high level but very little difference at the high school level. Target school teachers were younger, had less teaching experience, were more likely to be acquired directly from college than by transfer from another school, and were less likely to be without a four year degree.

Sex distribution and marital status were essentially the same in both samples.

These findings generally support the studies of Becker (1952) and Winget

(1952) which showed that younger, less experienced teachers tended to be assigned to low income, "downtown" schools. Differential "assignment" or placement appears to be more significant at the elementary level, but subsequent experience makes certain factors, such as age, more disparate between Target and Comparison junior high school staffs.

Findings related to age, previous experience, and education supported results of an independent study of high and low income area schools in Minneapolis conducted in 1962-63.

Table 19 summarizes some of the characteristics of Target and Comparison teaching staffs.

Table 19

Summary of Teaching Staff Characteristics in Target (T) and Comparison (C) Schools, 1958-59 to 1962-63

	Elementary		Junior High		Senior High		Total	
	T	C	T	C	T	C	T	C
Median Age	33	38	30	35	39	41	34	38
	.05		.001		n.s.		.001	
Per Cent Age 36-60	37	42	22	37	44	49	35	43
	n.s.		.01		n.s.		.01	
Per Cent Male	14	10	53	49	53	50	40	36
	n.s.		n.s.		n.s.		n.s.	
Per Cent Without Prior Teaching Experience	52	26	45	31	19	17	38	25
	.01		.02		n.s.		.01	
Per Cent Married	61	65	64	68	65	68	64	67
	n.s.		n.s.		n.s.		n.s.	
Per Cent with Advanced Degree	6	9	23	23	28	22	20	18
	n.s.		n.s.		n.s.		n.s.	
Per Cent Acquired by Transfer	14	27	9	33	27	22	16	28
	.05		.001		n.s.		.001	

n.s. = p greater than .10

SECTION III

TEACHER RETENTION IN TARGET AND COMPARISON SCHOOLS

In this section retention of teachers in Target and Comparison schools is studied without regard to possible causal factors. The basic question is simply, Were teacher retention rates lower in Target schools than they were in Comparison schools?

Again, the definition of retention is a limited one. Retention refers to teachers who taught in the same school from 1958-59 through 1962-63 (or who at least signed a contract for the 1962-63 school year in the same school). In view of this operational definition it must be recognized that school personnel policies and practices play an important role in determining teacher retention. Although teachers may request assignment to specific schools or areas of the city they are not completely free agents. The major factor dictating teacher placement (and thus retention - and non-retention by our definition) is the "best interests of the boys and girls in the schools."

Because school policies exert a strong influence on the dependent variable in this study some of the pertinent sections of the school Personnel Policies manual are quoted in the appendix (Minneapolis Public Schools, 1961. The 1961 edition is used as it reflects the policies in effect during the time with which this study is concerned).

Perhaps the most important statement in the policies manual - as far as this study is concerned - is that "Transfer and exchange of teachers is desirable and is encouraged in the Minneapolis Public Schools." This policy, tends to decrease retention of teachers, by our definition. Even more, it points out that turnover is not necessarily a bad thing.

It should also be noted that seniority plays an important part in transfers and that probationary teachers may transfer at the end of their first year, but usually not at the end of their second year. A careful reading of the Appendix is recommended.

Three hundred seventy-five (375) teachers were serving on Target school staffs in 1958-59. Of this group, 77% had taught in the same school the previous year (Returning Teachers) and 23% had entered the school for the first time at the start of the 1958-59 school year.[1] In Comparison schools there were 328 teachers of which 84% were returning and 16% were "new."

The total sample on which the retention study was based was thus made up of 703 teachers on Target and Comparison school staffs at the start of 1958-59. Eighty per cent of these teachers had taught in the same school in 1957-58 while twenty per cent had not taught during 1957-58 or had taught in a different Minneapolis school or in another school system.

Teacher Retention in Target and Comparison Schools: SCHOOL LEVEL

Fifty-five per cent of the 703 teachers who staffed Target and Comparison schools in 1958 were still teaching in the same school five years later. Retention differed with the economic level of the school district, however. More than six out of ten (61%) Comparison teachers were retained compared with five out of ten Target teachers (50%). There is less than one chance in one-hundred that a difference this large could occur by chance alone.

Retention was higher in Comparison schools at each school level, but it was significantly higher (statistically) in the junior high schools only. The difference at the junior high level was striking. Less than four out of ten Target teachers were retained (39%) while six out of ten Comparison teachers

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[1] It was possible that some of the new teachers had previously taught at the school although not during the preceding year.

(61%) were still teaching in the same school. The correlation (phi) between retention and economic level of the school district was .289 at the junior high level, but only .109 for all levels combined. See Table 20.

Factors which might have contributed to, or "caused" the large difference in retention at the junior high level will be dicussed in Sections IV and V.

Teacher Retention in Individual Target and Comparison Schools

An analysis of retention rates in individual Target and Comparison schools supports the overall conclusions. Although there is some overlap in rates for Target and Comparison elementary and high schools, the difference at the junior high level is distinct. While the retention rate for the two Comparison junior high schools was above the median retention rate of all schools, the three Target junior high schools were far below the median.

Table 21 illustrates the relative position of all schools in the sample by ranking them from high to low on the basis of the per cent of teachers retained. It may be observed that while three Target schools ranked above the overall median, two of these schools were high schools. When high schools were dropped out of the picture, as well they may be in view of the large overlap in socio-economic status of Target and Comparison high school districts, a much clearer picture of the differences in retention of Target and Comparison school teachers in individual schools emerged. When the 16 elementary and junior high schools were ranked by retention rate, two Target elementary schools fell above the median; three Target elementary schools and all three Target junior high schools fell below the median. By contrast, four Comparison elementary schools and both Comparison junior high schools were above the median and two Comparison elementary schools were below the median. The differences in teacher retention in individual Target and Comparison elementary and junior high schools were so large that the assumption that these schools were drawn from the same population was untenable (Mann-Whitney, one-tailed test, $p = .014$). This difference was primarily due to

Table 20

Retention of Target and Comparison School Teachers in the Same School from 1958-59 to 1962-63, by School Level

School Level	Target			Comparison			Target plus Comparison		
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%
Elementary	91	41	45.05	110	63	57.27	201	104	51.74
Junior High	102	40	39.22	99	60	60.61	201	100	49.75
Senior High	182	107	58.79	119	78	65.55	301	185	61.46
All Levels	375	188	50.13	328	201	61.28	703	389	55.33

Retained vs. Not Retained Target vs. Comparison	Chi-square	d.f.	p
Elementary	2.51	1	.10-.20
Junior High	8.36	1	.01
Senior High	1.84	1	.10-.20
All Levels	8.35	1	.01

Table 21

Per Cent of 1958-59 Teachers Retained in the Same School to 1962-63, by Individual School

School Code	% of teachers retained 1958-59 - 1962-63		Sample and school level[a]	Rank[b]
D	80		TE	1
U	73		CE	2
W	68		CJ	3
R	67		CE	4
I	66		TH	5
Y	66		CH	6
Z	65		CH	7
Q	59		CE	8
X	56		CJ	9
K	56		TH	10
V	52	MEDIAN	CE	11
E	50		TE	12
J	50		TH	13
T	47		CE	14
C	47		TE	15
S	46		CE	16
A	42		TE	17
G	41		TJ	18
H	40		TJ	19
F	35		TJ	20
B	30		TE	21

[a] T = Target

C = Comparison

E = Elementary School

J = Junior High School

H = Senior High School

[b] Ranks assigned on the basis of per cent retained carried to one decimal place thus there are no tied ranks.

the junior high schools since the distribution of rates for elementary schools alone was not statistically significant at the .10 level (Mann-Whitney, p = .165).

The reason for the unusually high retention rate in Target elementary school D is not explained by this study. It may be a chance fluctuation. Only ten teachers were on the staff of School D in 1958-59. Table 22 gives details for retention in the individual schools.

Teacher Retention, Teacher Turnover and Teacher Loss in Target and Comparison Schools

Up to this point this study has focused on teacher retention. By our definition retention means persistence in the same school. In this section, some consideration is given to the problem of teacher turnover and teacher loss. Teacher turnover refers to teachers who leave the school system to go to another school system. Teacher loss refers to teachers who have left the teaching profession. One major reason for emphasis on teacher retention in this study was the uncertain reliability of information relating to turnover and particularly to teacher loss. However, some rough guidelines are needed in order to give substance to the findings on teacher retention.

Subsequent Experience of Non-Retained Teachers

Personnel files were searched to obtain indices of why teachers left the sampled schools. Since 55% of the 703 teachers on the 1958 staff had been retained for the five years under study, information was sought for the 45% (314 teachers) who were not retained. Information, suggesting reasons for leaving, was obtained for 88% of the teachers who were not retained. In two-thirds of these cases the information may be considered as highly reliable. Two out of three non-retained teachers had transferred to another Minneapolis school or had terminated their services for non-chargeable reasons (i.e. those largely beyond the control of the school system such as death, retirement, or ill health). Approximately one out of three non-retained

Table 22

Retention of Teachers in Individual Target and Comparison Schools from 1958-59 to 1962-63

Target				Comparison			
School	On staff 1958-59	Still on staff 1962-63		School	On staff 1958-59	Still on staff 1962-63	
	N	N	%		N	N	%
A	19	8	42	Q	17	10	59
B	27	8	30	R	21	14	67
C	17	8	47	S	15	7	46
D	10	8	80	T	19	9	47
E	18	9	50	U	15	11	73
				V	23	12	52
Elem. Total	91	41	45	Elem. Total	110	63	57
F	20	7	35	W	40	27	68
G	39	16	41	X	59	33	56
H	43	17	40				
Jr. H. Total	102	40	39	Jr. H. Total	99	60	61
I	77	51	66	Y	59	39	66
J	44	22	50	Z	60	39	65
K	61	34	56				
Sr. H. Total	182	107	59	Sr. H. Total	119	78	66
All Target Schools	375	188	50	All Comparison Schools	328	201	61

teachers had left the school system or the teaching profession. Although "reasons" for leaving were given by teachers leaving the system or the profession these reasons were considered as relatively unreliable, i.e. a teacher who quit to "spend my time with my family" may really have quit because she didn't like to teach (Charters, 1956).

Information on non-retained teachers was obtained at the beginning of the school year following the year they left one of the sampled schools. Thus, there is no way of accurately determining five year turnover or loss rates for the entire sample. It is known that certain teachers who left Target and Comparison schools (i.e. non-retained) were still working for the Minneapolis Schools one year later, but it was not determined where they were located two, three, or four years later. Assuredly some of these teachers had left the system while others left teaching altogether. Therefore, our interpretations of teacher turnover and teacher loss can yield minimums, and maximum estimates only. Within limitations, however, the comparisons of teacher loss and teacher turnover between low and middle income schools should be on an equitable basis.

Table 23 presents information on non-retained teachers. Overall, the reasons for non-retention were remarkably similar in Target and Comparison schools. Forty-one per cent of the teachers in both samples were still with the Minneapolis School System at the start of the school year following the year they left one of the Target or Comparison schools. Approximately one-fourth (22% for Target schools; 26% for Comparison schools) had terminated for non-chargeable reasons such as retirement, death, or poor health. Thirteen per cent of the Target non-returnees had left to teach in another system and 24% had left the teaching profession. Eleven per cent of Comparison teachers not returning to their school had left to teach in another system while 21% had apparently left the teaching profession, at least temporarily. In summary, 59% of non-returning Target and Comparison teachers were no longer teaching in Minneapolis Schools. Thirteen per cent of the non-returning Target teachers could be considered lost due to turnover while eleven per cent of the Comparison teachers were lost in this manner. Teacher loss

Table 23

Status of 1958-59 Target (T) and Comparison (C) Teachers Who Were Not Retained in the Same School to 1962-63

(Per Cent)

Status	Elementary		Junior High		Senior High		All levels	
	T	C	T	C	T	C	T	C
With Mpls. School System[a]	44	42	39	41	41	41	41	41
Non-Chargeable Terminations[b]	28	30	20	25	20	23	22	26
Left the System[c]	2	21	18	16	17	13	13	11
Left the Profession[d]	26	7	23	19	22	23	24	21
Total	100%	100%	100%	101%	100%	100%	100%	99%
Not Retained - N	50	43	56	32	59	39	165	114
Retained - N	41	63	40	60	107	78	188	201
Information Not Available - N	0	4	6	7	16	2	22	13
Total 1958-59 Staff - N	91	110	102	99	182	119	375	328

[a] With Mpls. School System: As of the year following the year they left one of the sampled schools. Includes teaching in another Minneapolis Public School, administrative position, and leave of absence.

[b] Non-Chargeable Terminations: Retirement, death, poor health, dismissed.

[c] Left the System: Returned to college, or teaching in another school system.

[d] Left the Profession: Quit teaching (at least temporarily).

Status: Target vs. Comparison	Chi-square	d.f.	p
Elementary	12.62	3	.02
Junior High	.73	3	n.s.
Senior High	.35	3	n.s.
All Levels	.97	3	n.s.

(non-chargeable terminations plus those stating they were leaving the profession) was 46% for Target teachers and 47% for Comparison teachers.

Only at the elementary school level did Target and Comparison schools differ in their experience with non-retained teachers. In the elementary schools more Comparison teachers claimed that they were leaving to teach in other school systems while more Target teachers claimed that they were leaving the profession altogether.

Teacher Retention, Turnover, and Loss of the 1958-59 Staff

The preceding discussion of non-retained teachers should not be confused with the experience of the total Target and Comparison 1958-59 teaching staff. When retained and non-retained teachers were considered, a much different picture emerged. Table 24 shows that three out of four teachers (75%) in the combined sample were still with the Minneapolis Schools for at least the following year (1959-60). By 1962-63 one out of ten (10%) had terminated for chargeable reasons, approximately one out of eleven (9%) had given up teaching, and one out of twenty (5%) had gone to other school systems.

These figures give conservative estimates of teacher turnover and teacher loss due to the fact that non-returning teachers were not followed throughout the full five years. However, based on these data, some limits may be set. First, at a bare minimum, 55% of all teachers were still with the Minneapolis Schools at the start of the fifth year, since this percentage of teachers was still teaching in the same school in 1962-63 that they taught at in 1958-59. Second, a minimum of 19% of all teachers can be considered as lost to teaching since 10% had died, retired, etc., and 9% claimed that they were leaving the profession. Finally, a minimum of five per cent had gone to other teaching systems.

Maximum estimates were obtained by assuming that the experience of all teachers for whom five year information was not available was of a kind. For example, assuming that all teachers for whom information was not avail-

Table 24

Status of 1958-59 Teachers According to Personnel Records and Teachers' Stated Intentions

	Target								Comparison								Target plus Comparison							
	Elem.		Jr.H.		Sr.H.		Total		Elem.		Jr.H.		Sr.H.		Total		Elem.		Jr.H.		Sr.H.		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Still with Mpls. Schools[a]	63	69	62	65	131	79	256	73	81	76	73	79	94	80	248	79	144	73	135	72	255	80	504	75
Non-chargeable Terminations[b]	14	15	11	11	12	7	37	10	13	12	8	9	9	8	30	10	27	14	19	10	21	7	67	10
Left the System[c]	1	1	10	10	10	6	21	6	3	3	5	5	5	4	13	4	4	2	15	8	15	5	34	5
Left the Profession[d]	13	14	13	14	13	8	39	11	9	8	6	7	9	8	24	8	22	11	19	10	22	8	63	9
Total	91	99	96	100	166	100	353	100	106	99	92	100	117	100	315	101	197	100	188	100	283	100	668[e]	99

Status: Target vs. Comparison	Chi-square	p
Elementary	2.88	n.s.
Junior High	5.53	n.s.
Senior High	.43	n.s.
All Levels	4.16	n.s.

d.f. = 3 for all comparisons

[a] Status of teachers who left one of the sampled schools was determined the year after they left the school, includes administrative positions and leaves of absence.

[b] Deceased; retired; poor health; dismissed.

[c] Teaching in another school system; returned to college.

[d] Quit teaching (at least temporarily).

[e] Information not available for 35 cases.

able over the five years were still teaching in the Minneapolis schools then the maximum percentage of 1958-59 teachers still in the Minneapolis system would be 76%. This figure is obtained deductively by subtracting the known information.

100%
minus 55% known to be still teaching in the same school
minus 5% known to have gone to another system
minus 9% known to have left teaching
minus 10% known to have died, retired, etc.

equals 21% *Assumed* to be still in Minneapolis Schools if they did not retire, leave teaching, etc.

The 21% is then added to the 55% known to be still teaching in the same school in order to derive the *maximum possible* percentage of teachers still in the system. In like manner, maximum possible estimates were derived for other types of experience. Obviously, the possible maximum is not going to occur for any given type of experience, but this procedure does serve to establish crude boundaries which additional information may further refine and narrow. Thus, it was certain that for the sample studied *at least* one teacher out of four was lost to the system within five years - and this is the *best* experience for which one might hope. Other ranges are given below:

	Minimum		Maximum Possible
Still with Minneapolis Schools	55%	to	75%
Teacher Turnover (Went to Another System)	5%	to	26%
Left Teaching	9%	to	30%
Non-Chargeable Terminations	10%	to	31%
Teacher Loss (Left teaching plus Non-Chargeable Terminations)	19%	to	40%

When the known experience of teacher turnover and teacher loss is applied to the 21% of teachers for which five year experience is uncertain then the following estimates are obtained.

Still with Minneapolis Schools at start of 5th year	71%	
Teacher Turnover (Went to another system)	7%	
Teacher Loss (Left teaching plus non-chargeable terminations)	23%	
	101%	
(Left Teaching)		11%
(Non-Chargeable Terminations)		12%

These figures are our best estimates of the five year experience of 1958-59 teachers.

Differences in Reasons for Leaving of Non-retained Target and Comparison Teachers

In the broadest sense, teachers leaving Target and Comparison schools apparently left for the same reasons. See Tables 23 and 24. However, when reasons were analyzed in a more microscopic fashion some differences were revealed. Table 25 shows reasons for leaving of all non-retained teachers except those who transferred to other Minneapolis Public Schools. Figures in the table include all teachers on staffs from 1958-59 to 1962-63 who left their schools; not just teachers appointed in 1958-59.

More Target teachers assumed administrative or Central Office positions than did Comparison teachers (15 to 1). This factor contributed heavily to the difference between the two samples. More Comparison teachers retired or took leaves of absence. More Comparison teachers were dismissed (4 to 0). Dismissals are included in the Miscellaneous category, which also includes unstated reasons. The percentage of teachers who claimed they were leaving to teach in other systems or who left for "family" reasons appeared about equal in Target and Comparison schools.

Table 25

Reasons for Leaving of Non-Retained, Non-Transferring Target and Comparison Teachers (1958-59 to 1962-63)

Reasons for Leaving	Target		Comparison		Total	
	N	%	N	%	N	%
Family (Marriage, Pregnancy, Husband Moved, etc.)	67	31.3	46	34.3	113	32.5
To Teach in Another System	28	13.1	15	11.2	43	12.4
Retired	27	12.6	23	17.2	50	14.4
Returned to College	19	8.9	9	6.7	28	8.0
Deceased or Health Problem	16	7.5	8	6.0	24	6.9
Took Administrative Position (Minneapolis Schools)	15	7.0	1	.7	16	4.6
Leave of Absence	10	4.7	15	11.1	25	7.2
Miscellaneous	32	14.9	17	12.7	49	14.1
Total	214	100.0	134	99.9	348	100.1

Target vs. Comparison

Chi-square	d.f.	p
14.61	7	.05

Transfer to Other Minneapolis Schools

In the discussion on manner of accession it was noted that a much higher proportion of Comparison than Target school teachers was acquired by transfer from other Minneapolis Schools (see page 41). This finding suggests that Target schools were seen as relatively undesirable places to teach by teachers throughout the system.

This problem may be viewed from another angle. Where do Target and Comparison teachers go when they transfer to other schools? Do Target teachers transfer to other low income schools? Or do they tend to move from low income to higher income schools as Becker suggested? Since several low income schools lay outside the Target boundaries, measuring transfer to Target schools alone would be an inadequate test of these questions. Therefore, all schools included in the Youth Development Project Target and Buffer Areas were designated as low income schools (see Community Health and Welfare Council, 1964, p. 304). Buffer Areas had been selected by the YDP as alternate low income areas which would not be included in the demonstration even though the extent of poverty or delinquency was similar to that in the Target Areas.

Approximately 34% of all Minneapolis Schools were thus designated as "low income" schools. Between 1958 and 1962, thirty-one per cent of Target teachers transferring to other Minneapolis Schools transferred to low income schools (26 of 85 teachers). Fifteen of fifty transferring Comparison teachers, or 30%, also transferred to low income schools.

The evidence suggests that teachers leaving Target and Comparison schools to transfer to other Minneapolis schools typically showed no disproportionate preference for low or high income schools. This conclusion must be guarded since reasons for transferring, are not known. Note also that reference is made to 34% of all schools as being low income schools but no estimate is made of the percentage of all teachers represented by these schools. Considering other possibly influential factors, such as school level, it becomes apparent that this evidence must be considered as no more than a suggestion for further study.

SECTION IV

CORRELATES OF TEACHER RETENTION

In this section some factors related to teacher retention in the same school are investigated. The basic sample for this investigation was 703 teachers under contract in Target and Comparison schools at the start of the 1958-59 school year. Included in this sample were returning teachers, i.e. those who had taught in the same school the previous year, plus all teachers new to the school - regardless of their experience the previous year. "New" teachers included transfers from other schools, experienced teachers returning to the profession, and newly acquired college graduates.

A "retained" teacher was one who served in the same school each year from 1958-59 to 1961-62 and who signed a contract to teach in that school in 1962-63. A teacher who discontinued teaching at the school to which she was assigned in 1958-59 for any reason was considered as "not retained." It should be clear that these definitions are not consonant with the usual definitions of teacher loss or teacher turnover.

First, the relationship of each independent variable, e.g. age, sex, etc., will be considered as it relates to the dependent variable of teacher retention (in the same school). Target and Comparison samples are combined for this purpose. An example of the kind of question this approach attempts to answer is: Is age related to retention?

Next, retention within each sample is investigated as it relates to each independent variable. The type of question this analysis attempts to answer is exemplified by: Is age related to teacher retention in low income area schools? Is age related to retention in above average income area schools?

This approach treats socio-economic status of the school district as a possible suppressor variable. Relationships between retention and the independent variable which did not appear in the combined samples might thus appear when socio-economic sub-groups are considered.

Finally, differences in retention between Target and Comparison schools are considered when each of the samples is matched on the independent variable under consideration. An example of the null hypothesis this procedure attempts to test is: There is no difference in the retention of Target and Comparison teachers when the staffs have the same age distribution.

W. W. Charters, who has probably written more extensively on research problems involved in studying teacher retention than any other investigator, has pointed out some of the weaknesses involved in using the uni-factor approach (1965). While agreeing with this view, it is convenient for expository purposes to consider the variables separately before considering them in combination. Little space will be devoted to the individual variables considered in this section. Variables, in combination, will be discussed in Section V.

Teacher Retention and School Level

Fifty-five per cent of the 703 teachers who staffed Target and Comparison schools in the fall of 1958 were still teaching in the same school some five years later. Retention varied with school level. High school teachers were more inclined to stay in the same school than either elementary or junior high school teachers. Six out of ten high school teachers remained in the same school while approximately five out of ten elementary and junior high teachers taught in the same school over the five year period. (See Table 20; Chi-square across school levels = 8.15, d.f. = 2, p = .02.)

Teacher Retention within Target and Comparison Schools Samples: SCHOOL LEVEL

It was illustrated in Section III that retention of teachers in Target schools was significantly lower than retention in Comparison schools. Although retention was lower for Target schools at all three levels, the major difference occurred at the junior high school level.

In this section retention within the Target and Comparison samples is considered. Did retention in Target elementary schools differ from retention in Target junior and senior high schools? Did retention within the Comparison sample differ by school level?

Table 20 shows that retention in Comparison schools ranged from a low of 57% in elementary schools to a high of 66% in high schools. Junior high schools retained 61% of the teachers in the same school for five years. This variation across Comparison schools was not statistically significant at the .10 level. (Chi-square = 1.67, d.f. = 2.) In other words, it appears that by and large retention in Comparison schools was about the same regardless of whether the teacher taught in an elementary school, a junior high, or a high school.

This was not the case in the low income area Target schools. Retention in these schools not only differed significantly by level (Chi-square = 11.25, d.f. = 2, $p = <.10$) but the pattern of retention differed from the pattern in Comparison schools. Retention in Target schools ranged from 39% to 59%; a 20% range compared with a range of only 9% within Comparison schools. The low point in retention in Target schools was at the junior high level, not at the elementary level as in the Comparison sample. Retention of Target elementary teachers (45%) tended to be closer to retention of Target junior high teachers than to Target high school teachers. In both samples retention was highest for high school teachers.

Conclusions: Retention and School Level

Total Sample:

Teacher retention was higher in high schools than in elementary or junior high schools.

The percentage of teachers retained in elementary and junior high schools was approximately the same.

Within Samples:

School level was apparently not related to teacher retention in middle income Comparison schools.

In low income Target schools retention varied greatly with school level. Retention in Target junior high schools was particularly low.

For Target schools retention was poorest at the junior high level. For Comparison schools retention was poorest at the elementary level.

Between Samples:

Retention in Target schools was lower than retention in Comparison schools at all school levels. However, the major difference (22%) was at the junior high level where 39% of Target teachers and 61% of Comparison teachers were retained.

At the elementary level there was a 12% difference in retention favoring Comparison schools and at the high school level the difference was 7% - again favoring Comparison schools.

Teacher Retention and Marital Status

Total Sample:

Retention favored single teachers at each school level. However, differences in retention of single and married teachers were not statistically significant ($p = > .10$).

See Table 26.

Within Samples:

Marital status was not related to retention at any level within the Target school sample.

In Comparison schools single teachers had a significantly higher retention rate than married teachers at the high school level, but not at the elementary or junior high level.

In both samples, at all levels, retention favored single teachers to a slight degree.

See Table 27.

Between Samples:

Both single and married teachers had higher retention rates in Comparison schools than in Target schools. Retention rates differed significantly for single teachers at the junior high and high school level. For married teachers the rates differed significantly at the junior high level only.

See Table 27.

Table 26

Number and Per Cent of 1958-59 Teachers Still Teaching in the Same School in 1962-63, by Marital Status

School Level	Married teachers[a] On staff 1958-59	Married teachers[a] Still on staff 1962-63		Single teachers On staff 1958-59	Single teachers Still on staff 1962-63		All teachers On staff 1958-59	All teachers Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%
Elementary	129	64	49.6	71	39	54.9	200	103	51.5
Junior High	133	65	48.9	63	33	52.4	196	98	47.6
Senior High	187	110	58.8	105	70	66.7	292	180	61.6
All Levels	449	239	53.2	239	142	59.4	688	381	55.4

[a] Includes separated, widowed, and divorced.

Married vs. Single, Retained vs. Not Retained	Chi-square	p
Elementary	.32	n.s.
Junior High	.09	n.s.
Senior High	1.43	n.s.
All Levels	2.17	n.s.

d.f. = 1 for all comparisons

Table 27

Number and Per Cent of 1958-59 Target and Comparison Teachers Still Teaching in the Same School in 1962-63, by Marital Status and School Level

School Level	Target						Comparison					
	Single			Married			Single			Married		
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%	N	N	%
Elementary	30	14	46.7	60	26	43.3	41	25	61.0	69	38	55.1
Junior High	31	13	41.9	68	26	38.2	32	20	62.5	65	39	60.0
Senior High	65	39	60.0	110	65	59.1	40	31	77.5	77	45	58.4
All Levels	126	66	52.4	238	117	49.2	113	76	67.3	211	122	57.8

School Level	Single vs. Married Retained vs. Not Retained				Target vs. Comparison Retained vs. Not Retained			
	Target		Comparison		Single		Married	
	Chi-square	p	Chi-square	p	Chi-square	p	Chi-square	p
Elementary	.01	n.s.	.16	n.s.	.91	n.s.	1.33	n.s.
Junior High	.02	n.s.	.00	n.s.	1.91	n.s.	5.46	.02
Senior High	.00	n.s.	3.41	.10	2.67	.10	.00	n.s.
All Levels	.23	n.s.	2.37	n.s.	4.87	.05	3.03	.10

d.f. = 1 for all comparisons

Teacher Retention and Teacher's Level of Education

Total Sample:

As a general rule, teachers with advanced degrees were more likely to be retained. However, at the elementary and high school levels those teachers without four year degrees had the highest retention rates. This apparent paradox is caused by the substantially superior retention of advanced degree teachers at the junior high level and the very small number of non-degree teachers in the high schools.

Since the non-degree teacher is disappearing from the system the important finding is the consistently superior retention of advanced degree teachers over teachers with four year degrees only.

See Table 28.

Within Samples:

Within Target and Comparison samples retention varied relatively little with educational status. Only in Target junior high school were the differences significant. Thirty-seven per cent of B. A. teachers and 59% of advanced degree teachers were retained in Target junior high schools. Only fourteen per cent (N = 7) of the non-degree teachers were retained.

At all levels, in both samples, retention of advanced degree teachers was superior to retention of four year degree teachers. At the Target elementary level and at the Comparison junior high level this superiority was negligible.

See Table 29.

Between Samples:

Retention rates favored Comparison teachers at all school levels regardless of teacher's level of education. It is important however that one of the largest differences in retention between Target and Comparison staffs occurred among four year degree teachers at the junior high level while the smallest difference was also at the junior high level, among advanced degree teachers.

See Table 29.

Table 28

Number and Per Cent of 1958-59 Teachers Still Teaching in the Same School in 1962-63, by Level of Education

School Level	Bachelor's degree			Advanced degree			Less than a Bachelor's degree			All educational levels		
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%	N	N	%
Elementary	122	57	46.7	20	11	55.0	52	32	61.5	194	100	51.5
Junior High	116	57	49.1	58	36	62.1	16	6	37.5	190	99	52.1
Senior High	193	116	60.1	86	61	70.9	5	4	80.0	284	181	63.7
All Levels	431	230	53.4	164	108	65.9	73	42	57.5	668	380	56.9

Retained vs. Not Retained by Education Level	Chi-square	p
Elementary	3.32	n.s.
Junior High	4.58	.10
Senior High	3.58	n.s.
All Levels	7.52	.05

d.f. = 2 for all comparisons

Table 29

Number and Per Cent of 1958-59 Target and Comparison Teachers Still Teaching in the Same School in 1962-63, by Level of Education and School Level

School Level	Target									Comparison								
	B.A. degree			Advanced degree			No B.A. degree			B.A. degree			Advanced degree			No B.A. degree		
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%	N	N	%	N	N	%	N	N	%
Elementary	52	21	40.4	9	4	44.4	24	12	50.0	70	36	51.4	11	7	63.6	28	20	71.4
Junior High	59	22	37.3	29	17	58.6	7	1	14.3	57	35	61.4	29	19	65.5	9	5	55.6
Senior High	117	67	57.3	53	36	67.9	2	2	-	76	49	64.5	33	25	75.7	4	2	50.0
All Levels	228	110	48.3	91	57	62.6	33	15	45.4	203	120	59.1	73	51	69.9	41	27	65.8

School Level	B.A. vs. Advanced Degree vs. No B.A. Degree; Retained vs. Not Retained				Target vs. Comparison; Retained vs. Not Retained					
	Target		Comparison		B.A.		Advanced Degree		No B.A.	
	Chi-square	p	Chi-square	p	Chi-square	p	Chi-square	p	Chi-square	p
Elementary	1.13	n.s.	3.44	n.s.	1.05	n.s.	.17	n.s.	1.68	n.s.
Junior High	6.79	.05	.32	n.s.	5.82	.02	.01	n.s.	1.37	n.s.
Senior High	.41	n.s.	.14	n.s.	.72	n.s.	.29	n.s.	.00	n.s.
All Levels	1.69	n.s.	2.89	n.s.	4.67	.05	.65	n.s.	2.33	n.s.
	d.f. = 2 for all comparisons				d.f. = 1 for all comparisons					

Teacher Retention and Manner of Accession

This section deals only with teachers who were new to Target and Comparison staffs in 1958-59. Returning teachers are not included.

Total Sample:

Retention rates varied significantly according to the manner in which the teacher joined the teaching staff. In general, teachers transferring from other schools had the highest retention (63%) while beginning teachers and teachers returning to teaching after at least one year's absence had approximately the same retention rates (31% and 36% respectively).

See Table 30.

Within Samples:

Transferring teachers had higher retention rates than teachers entering the schools by other means in both Target and Comparison samples. In Target schools, however, retention rates did not differ significantly according to manner of accession. In Comparison schools they did, with highest retention among transferring teachers and lowest retention among entering teachers.

See Table 31.

Between Samples:

Retention rates between Target and Comparison schools did not differ significantly at any level for any method of accession. Although sample sizes were very small, the evidence at hand suggests that retention rates of entering teachers were similar in Target and Comparison schools, as were retention rates of transfers and re-entering teachers.

See Table 31.

Table 30

Number and Per Cent of New Teachers in 1958-59 Who Were Still Teaching in the Same School in 1962-63, by Manner of Accession

School Level	Entering			Re-entering			Transferring			All new teachers		
	Joined staff 1958-59	Still on staff 1962-63		Joined staff 1958-59	Still on staff 1962-63		Joined staff 1958-59	Still on staff 1962-63		Joined staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%	N	N	%
Elementary	21	9	42.9	21	7	33.3	7	6	85.7	49	22	44.9
Junior High	17	2	11.8	17	5	29.4	12	7	58.3	46	14	29.4
Senior High	16	6	37.5	17	8	47.1	8	4	50.0	41	18	43.9
All Levels	54	17	31.5	55	20	36.4	27	17	63.0	136	54	39.7

Retained vs. Not Retained by Manner of Accession	Chi-square	p
Elementary	6.00	.05
Junior High	3.69	n.s.
Senior High	.43	n.s.
All Levels	7.87	.02

d.f. = 2 for all comparisons

Table 31

Number and Per Cent of Teachers Joining Target and Comparison Staffs in 1958-59 Still Teaching in the Same School in 1962-63, by Manner of Accession

School Level	Target									Comparison								
	Entering			Re-entering			Transferring			Entering			Re-entering			Transferring		
	Joined staff 1958-59	Still on staff 1962-63		Joined staff 1958-59	Still on staff 1962-63		Joined staff 1958-59	Still on staff 1962-63		Joined staff 1958-59	Still on staff 1962-63		Joined staff 1958-59	Still on staff 1962-63		Joined staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%	N	N	%	N	N	%	N	N	%
Elementary	13	7	53.9	15	4	26.7	3	2	-	8	2	-	6	3	-	4	4	-
Junior High	14	1	7.1	12	4	33.3	3	1	-	3	1	-	5	1	-	9	6	-
Senior High	12	4	33.3	11	4	36.4	6	3	-	4	2	-	6	4	-	2	1	-
All Levels	39	12	30.8	38	12	31.6	12	6	50.0	15	5	33.3	17	8	47.6	15	11	73.3

School Level	Entering vs. Re-entering vs. Transferring; Retained vs. Not Retained				Target vs. Comparison Retained vs. Not Retained					
	Target		Comparison		Entering		Re-entering		Transferring	
	Chi-square	p	Chi-square	p	Chi-square	p	Chi-square	p	Chi-square	p
All Levels	1.27	n.s.	4.96	.10	.02	n.s.	.64	n.s.	.72	n.s.

d.f. = 2

Tests were not run for school levels due to small sample sizes.

Teacher Retention and Sex of Teacher

Total Sample:

Retention of male teachers was higher than retention of female teachers to a significant degree. However, differences in retention between the sexes were negligible at the elementary and junior high levels. In high schools, 67% of the men and 55% of the women were retained.

Table 32 shows retention rates for each sex for the combined Target - Comparison sample. Phi coefficients computed from the significant Chi-squares show that the degree of relationship between sex and retention, when considered apart from other factors, accounts for very little variance. For all school levels, phi equals .083. At the high school level the correlation between sex and retention is only .119.

See Table 32.

Within Samples:

Patterns of retention according to sex of teacher differed within the two samples. In Target schools, males had superior retention at each school level, although the difference was reliable at the junior high level only. In Target junior high schools about one-half the male teachers was retained while approximately one fourth of all female teachers was retained.

In Comparison elementary and junior high schools, retention was greater for females than males. In Comparison high schools, the reverse was true. Male teachers had higher retention rates than females ($p = .10$). This reversal cancelled out the elementary and junior high results so that the total Comparison sample shows no difference in retention rates between the sexes.

See Table 33.

Between Samples:

Retention rates for male teachers did not differ significantly at any school level when Target and Comparison schools were compared. By contrast, retention of female teachers differed very significantly at the elementary and junior high level, but not at the high school level. Retention of Comparison junior high female teachers was two times greater than the retention of Target junior high female teachers! (65% to 27%). At the elementary level Comparison female teachers had a 19% advantage in retention (60% to 41%). In the high schools there was only a two per cent difference favoring the Comparison schools (56% to 54%).

See Table 33.

Table 32

Number and Per Cent of 1958-59 Teachers Still Teaching in the Same School in 1962-63, by Sex of Teachers

School Level	Male teachers			Female teachers			All teachers		
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%
Elementary	25	13	52.0	176	91	51.7	201	104	51.7
Junior High	102	53	52.0	99	47	47.5	201	100	49.7
Senior High	159	107	67.3	142	78	54.9	301	185	61.5
All Levels	286	173	60.5	417	216	51.8	703	389	55.3

Male vs. Female Retained vs. Not Retained	Chi-square	p
Elementary	.03	n.s.
Junior High	.24	n.s.
Senior High	4.33	.05
All Levels	4.83	.05

d.f. = 1 for all comparisons

Table 33

Number and Per Cent of 1958-59 Target and Comparison Teachers Still Teaching in the Same School in 1962-63, by Sex and School Level

School Level	Target						Comparison					
	Male			Female			Male			Female		
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%	N	N	%
Elementary	15	10	66.7	76	31	40.8	10	3	30.0	100	60	60.0
Junior High	57	28	49.1	45	12	26.7	45	25	55.6	54	35	64.8
Senior High	95	60	63.2	87	47	54.0	64	47	73.4	55	31	56.4
All Levels	167	98	58.7	208	90	42.3	119	75	63.0	209	126	60.3

School Level	Male vs. Female Retained vs. Not Retained				Target vs. Comparison Retained vs. Not Retained			
	Target		Comparison		Male		Female	
	Chi-square	p	Chi-square	p	Chi-square	p	Chi-square	p
Elementary	2.43	n.s.	2.23	n.s.	1.93	n.s.	5.64	.02
Junior High	4.41	.05	.51	n.s.	.20	n.s.	12.84	.001
Senior High	1.21	n.s.	3.09	.10	1.40	n.s.	.01	n.s.
All Levels	8.19	.01	.01	n.s.	.38	n.s.	11.42	.02

d.f. = 1 for all comparisons

Teacher Retention and Previous Teaching Experience

Total Sample:

The amount of previous teaching experience was strongly related to teacher retention. The more teaching experience a teacher had, the greater the probability that he or she would be retained. Thus, 29% of the teachers without prior experience were still teaching in the same school five years later while 36% of the teachers with one year experience were retained; 49% of those with 2-5 years experience, and 63% of those with 6 or more years were retained.

The pattern of increasing retention with increasing experience held true at each school level although there were some minor reversals in the "no experience" and "one year experience" categories.

Differences in retention rates by amount of previous experience were very significant in secondary schools but not significant in elementary schools ($p = >.10$). Teacher retention in elementary schools ranged from 42% (one year experience) to 56% (6 or more years experience). This 14% range seems slight when contrasted with a range of 46% in the senior high school sample and 51% in the junior high school sample. Retention rates in the senior high schools ranged from 21% (one year experience) to 67% (6 or more years). Retention in junior high schools ranged from 12% (no experience) to 63% (6 or more years).

See Table 34.

Within Samples:

Patterns of retention as related to previous teaching experience were quite similar within Target and Comparison samples. In both cases, retention increased directly with amount of previous teaching experience.

One discordant finding was noted. In Target elementary schools retention appeared to have no direct relationship to previous teaching experience.

See Table 35.

Between Samples:

When Target and Comparison staffs were equated for length of experience much of the difference in retention between these two samples disappeared.

In elementary schools, retention of Comparison teachers with two or more years experience was greater than retention of Target teachers with similar amounts of experience. Retention of beginning elementary teachers (0-1 years experience) was higher among Target staffs - but not to a significant degree.

In the senior high schools the differences between the two samples were not significant and no consistent pattern emerged.

Only in the junior high schools was retention of Comparison teachers superior to retention of Target teachers at each level of experience, although the differences in retention were not statistically significant for any given amount of experience.

See Table 35.

Table 34

Number and Per Cent of 1958-59 Teachers Still Teaching in the Same School in 1962-63, by Amount of Teaching Experience

School Level	Years of teaching experience at time of accession												Total		
	No experience			1 year			2-5 years			6 or more years					
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%	N	N	%	N	N	%
Elementary	21	9	42.9	19	8	42.1	60	30	50.0	95	53	55.8	195	100	51.3
Junior High	17	2	11.8	22	9	40.9	63	29	46.0	92	58	63.0	194	98	50.5
Senior High	17	5	29.4	14	3	21.4	52	26	50.0	203	136	67.0	286	170	59.4
All Levels	55	16	29.1	55	20	36.4	175	85	48.6	390	247	63.3	675	368	54.5

Retained vs. Not Retained by Previous Experience	Chi-square	p
Elementary	3.12	n.s.
Junior High	17.30	.001
Senior High	21.47	.001
All Levels	36.36	.001

d.f. = 3 for all comparisons

Table 35

Number and Per Cent of 1958-59 Target and Comparison Teachers Still Teaching in the Same School in 1962-63, by Previous Teaching Experience

School Level	Target									Comparison								
	0-1			2-5			6 or more			0-1			2-5			6 or more		
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%	N	N	%	N	N	%	N	N	%
Elementary	20	10	50.0	29	10	34.5	37	17	45.9	20	7	35.0	31	20	64.5	58	36	62.1
Junior High	25	5	20.0	38	16	42.1	36	19	52.8	14	6	42.9	25	13	52.0	56	39	69.6
Senior High	22	6	27.3	35	19	54.3	116	80	69.0	9	2	22.2	17	7	41.2	87	66	75.9
All Levels	67	21	31.3	102	45	44.1	189	116	61.4	43	15	32.1	73	40	54.8	201	141	70.1

School Level	0-1 vs. 2-5 vs. 6 or More Years Retained vs. Not Retained				Target vs. Comparison Retained vs. Not Retained					
	Target		Comparison		0-1		2-5		6 or more	
	Chi-square	p	Chi-square	p	Chi-square	p	Chi-square	p	Chi-square	p
Elementary	1.39	n.s.	5.26	.10	.41	n.s.	4.27	.05	1.77	n.s.
Junior High	6.65	.05	4.54	.10(Appr.)	1.21	n.s.	.25	n.s.	2.00	n.s.
Senior High	14.37	.001	16.20	.001	Fisher's Exact Test	n.s.	.34	n.s.	.85	n.s.
All Levels	20.42	.001	20.65	.001	.03	n.s.	1.53	n.s.	2.95	n.s.

d.f. = 2 for all comparisons

d.f. = 1 for all comparisons

Teacher Retention and Age

Total Sample:

The pattern of retention, when age of teacher was considered, was similar to the pattern revealed when previous teaching experience was considered. Namely, increasing retention with increasing age - up to a point. When retirement years are reached, retention drops.

Retention of the very young teacher was dramatically poor. None of the 43 teachers under age 26 were retained in the same school for five years. Moreover, 85% of these teachers left the Minneapolis School System and over 60% apparently left the teaching profession.

Retention was highest for ages 36-60 and particularly high for ages 51-59. More than three-fourths of the 51-59 group was retained in the same school.

Retention rates, were similar in elementary, junior, and senior high schools for younger and older teachers. However, within the "career" ages of 36-60, retention was higher in the senior high schools than in either elementary of junior high schools.

See Table 36.

Within Samples:

The pattern of retention within Target and Comparison samples was the same. No variation in the pattern was revealed at any school level. Lowest retention occurred among the youngest teachers and highest retention occurred for teachers in the "career" years of 36-60.

See Table 37.

Between Samples:

Retention favored the Comparison sample for all age groups at the elementary and junior high levels, although not significantly. In the high school sample retention favored Comparison schools for the 61 and over group only. The accumulative effect of greater retention for Comparison teachers, age 61 and over, at each school level resulted in a significant difference between Target and Comparison samples for this age group (44% to 66%). Differences for the other age groups were only 3% for ages 36-60 and 5% for age 35 and under.

See Table 37.

Table 36

Number and Per Cent of 1958-59 Teachers Still Teaching in the Same School in 1962-63, by Age

School Level	Age 35 and under			Age 36-60			Age 61 and over		
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%
Elementary	65	18	27.7	88	60	68.2	42	22	52.4
Junior High	77	21	27.3	77	58	75.3	35	20	57.1
Senior High	74	20	27.0	165	133	80.6	45	27	60.0
All Levels	216	59	27.3	330	251	76.1	122	69	56.6

35 and under vs. 36-60
vs. 61 and over

Retained vs. Not Retained	Chi-square	p
Elementary	24.55	.001
Junior High	36.02	.001
Senior High	63.45	.001
All Levels	126.38	.001

d.f. = 2 for all comparisons

Table 37

Number and Per Cent of 1958-59 Target and Comparison Teachers Still Teaching in the Same School in 1962-63, by Age

School Level	Age of Target teachers									Age of Comparison teachers								
	35 and under			36-60			61 and over			35 and under			36-60			61 and over		
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%	N	N	%	N	N	%	N	N	%
Elementary	30	7	23.3	38	23	60.5	18	7	38.9	35	11	31.4	50	37	74.0	24	15	62.5
Junior High	48	12	25.0	31	22	71.0	15	6	40.0	29	9	31.0	46	36	78.3	20	14	70.0
Senior High	52	14	26.9	96	78	81.2	24	13	54.2	22	6	27.3	69	55	79.7	21	14	66.7
All Levels	130	33	25.4	165	123	74.6	57	26	45.6	86	26	30.2	165	128	77.6	65	43	66.2

School Level	35 and under vs. 36-60 vs. 61 and over; Retained vs. Not Retained				Target vs. Comparison Retained vs. Not Retained					
	Target		Comparison		35 and under		36-60		61 and over	
	Chi-square	p	Chi-square	p	Chi-square	p	Chi-square	p	Chi-square	p
Elementary	22.04	.001	15.57	.001	.19	n.s.	1.23	n.s.	1.44	n.s.
Junior High	16.32	.001	13.52	.01	.93	n.s.	.21	n.s.	1.98	n.s.
Senior High	42.42	.001	20.73	.001	.06	n.s.	.00	n.s.	.28	n.s.
All Levels	71.38	.001	54.48	.001	.39	n.s.	.26	n.s.	4.41	.05
	d.f. = 2 for all comparisons				d.f. = 1 for all comparisons					

SUMMARY

Total Sample:

Most of the independent variables investigated, when analyzed one at a time, showed a significant relationship to teacher retention. Retention was found to be higher in high schools, among teachers with advanced degrees, among teachers without four year degrees, among males (particularly at the high school level), among teachers with previous teaching experience, among older teachers (up to the point of retirement), and among teachers acquired by transfer. Retention was significantly lower in junior high schools, among female teachers in senior high schools, among teachers with four year degrees, among teachers with little or no previous teaching experience, among younger teachers, and among beginning teachers.

Marital status, when considered independently of other factors such as age, showed no relationship to retention. Single teachers were as likely to be retained as married teachers.

An indication of the degree of relationship between retention and the selected independent variables was obtained by converting the significant Chi-squares into Phi or Contingency Coefficients. Although these two indices are not directly comparable they may help the reader get some feeling for the strength of the relationships discovered. The following correlations with teacher retention were computed for the combined Target and Comparison samples, all levels. (All correlations are Contingency Coefficients except for sex which is a Phi Coefficient.)

Age	.399
Experience	.344
Accession	.235
School Level	.107
Education	.105
Sex	.083
Marital Status	n.s.

Within Samples:

When the independent variables were examined within samples of low income and middle income area schools results usually, but not always, agreed with total sample findings.

Similar patterns of retention were noted in Target and Comparison samples for marital status, education, manner of accession, age, and previous teaching experience. But in spite of pattern similarity, differences in degree appeared to exist for several of these variables. Although retention was higher for single teachers than married teachers in both samples, it was significantly higher in the Comparison sample only. In Target schools no significant relationship was found between retention and marital status, education, or manner of accession. In Comparison schools no significant relationship was found between retention and education, or retention and school level.

The most consistent relationships, in both pattern and degree, were between retention and age, and retention and previous teaching experience.

The relationship between sex and retention, and between school level and retention, was quite different in the two samples. In Comparison schools retention rates were approximately the same in elementary, junior high and senior high schools. By contrast, Target senior high schools had greater retention than Target junior high or elementary schools. The pattern of retention also differed for the two samples. In Target schools retention was poorest at the junior high level. In Comparison schools retention was poorest at the elementary level. Senior high schools had the highest retention in both samples.

Male teachers were more likely to be retained than female teachers at all school levels in the Target sample. This was not true for the Comparison sample. A greater proportion of female teachers was retained in Comparison elementary and junior high schools. Only in senior high schools were males more likely to be retained than females. Sex and retention correlated .148 for the total Target sample. Sex and retention were not significantly correlated for the total Comparison sample. Correlations between retention and the selected independent variables are shown below for all schools in each sample.

	Target	Comparison
Age - - - - - - - - - - -	.411	.383
Experience - - - - - -	.232	.247
School Level - - - - -	.175	n.s.
Sex - - - - - - - - - - -	.148	n.s.
Accession - - - - - - -	n.s.	.308
Marital Status - - - -	n.s.	n.s.
Education - - - - - - -	n.s.	n.s.

Within the Target sample, education and retention correlated .259 at the junior high level. In Comparison senior high schools retention correlated .170 with marital status and .161 with sex.

Age was the only variable which showed a consistently significant relationship with retention for both samples at all school levels. Correlations for age and retention varied little, ranging from .346 in Comparison junior high schools to .452 in Target elementary schools.

Between Samples:

Differences in teacher retention between Target and Comparison staffs are summarized in Tables 38 and 39. Tables 40, 41, and 42 give greater detail for elementary, junior high, and senior high schools, respectively.

Overall, six out of ten Comparison teachers but only five out of ten Target teachers were retained. Retention was higher in Comparison schools at all levels. Differences were greatest at the junior high level where 61% of Comparison teachers and 39% of Target teachers were retained.

When Target and Comparison total samples were compared, with certain independent variables controlled, the differences in retention did not always reach statistical significance of an acceptable level. However, retention was higher for Comparison staffs in all cases. Comparison staffs had significantly higher retention among single teachers, married teachers, teachers with four year degrees, females, and teachers age 61 and over. The finding relating to age is of particular interest since it is generally believed that the youngest teachers are most susceptible to socio-economic factors in the school districts.

Analysis of retention by school level revealed some intriguing differences. At the elementary level retention was significantly higher in Comparison schools for female teachers and for experienced teachers (2 or more years). Retention of male teachers, and inexperienced teachers was actually higher in Target schools although the differences in retention were not statistically significant.

Marital status was the only factor which appeared to have a significant relationship with retention in the senior high schools. Single teachers had significantly higher retention in Comparison schools. For married teachers retention rates were almost identical in Target and Comparison schools.

The "per cent difference" column of Tables 40 - 42 shows several minus signs (retention higher in Target than Comparison schools) for elementary and senior high schools but only one minus sign at the junior high level. The column also shows some fairly large figures even though they are not statistically significant. These nonsignificant large numbers reflect the very small sample sizes involved. (Sample sizes were not repeated in Tables 38 - 42 since they were presented previously and since too much detail seemed undesirable for summarization tables.) Note that the percentage difference for teachers age 61 and over is not significant at any school level although the differences range from 13% to 30%. For the total sample, as the result of increased sample size, the 20% difference is significant at the .05 level.

The sum and substance of the analysis of teacher retention, when certain independent variables were equated and considered in unique fashion, was that differences in retention between low income and middle income area schools did exist and the differences "favored" the schools in the wealthier areas of the city. These differences appeared to be greatest in junior high schools and among female teachers. Differences at the senior high level were generally negligible. The smaller differences at the senior high level supported the hypothesis that socio-economic level influences teacher retention since economic differences for Target and Comparison high schools were smaller than for Target and Comparison elementary and junior high schools. Older teachers also appeared to have higher retention rates in Comparison schools, particularly at the elementary and junior high school level. This finding is in conflict with previous studies which suggested greatest differences among youngest teachers.

In spite of significant differences, the relationship between teacher retention and socio-economic level of the school appears to be of a low degree. The correlation (Phi) between retention and socio-economic status was .109 for all schools and .289 for junior high schools. None of the significant correlations between teacher retention and socio-economic status of the school areas, when selected variables were held constant, were greater than .25.

Table 38

Summary of Teacher Retention in All Target (T) and Comparison (C) Schools

Item	Per cent of teachers retained		Per cent difference (C minus T)	p
	Target	Comparison		
School Level				
Elementary	45	57	12	.10-.20
Junior High	39	61	22	.01
Senior High	59	66	7	.10-.20
All Levels	50	61	11	.01
Marital Status				
Single	52	67	15	.05
Married	49	57	8	.05-.10
Education				
B.A. - B.S.	48	59	11	.05
Advanced Degree	62	70	8	n.s.
Less than a B.A. Degree	45	66	21	n.s.
Manner of Accession				
Entering	31	33	2	n.s.
Re-entering	32	47	15	n.s.
Transferring	50	73	23	n.s.
Sex				
Male	59	63	4	n.s.
Female	42	60	18	.02
Previous Teaching Experience				
0 Years	28	31	3	n.s.
1 Year	36	37	1	n.s.
2-5 Years	44	55	11	n.s.
6 or More Years	61	70	9	n.s.
Age				
35 and Under	25	30	8	n.s.
36-60	75	78	3	n.s.
61 and Over	46	66	20	.05

Table 39

Summary of Teacher Retention in Target (T) and Comparison (C) Schools, by School Level

Item	Per cent of teachers retained							
	Elementary		Junior High		Senior High		Total	
	T	G	T	C	T	C	T	C
Total Sample	45	57	39	61	59	66	50	61
	(.10-.20)		(.01)		(.10-.20)		(.01)	
Marital Status								
Single	47	61	42	63	60	78	52	67
	(n.s.)		(.10-.20)		(.10)		(.05)	
Married	43	55	38	60	59	58	49	57
	(n.s.)		(.02)		(n.s.)		(.05-.10)	
Education								
B.A. - B.S.	40	51	37	61	57	64	48	59
	(n.s.)		(.02)		(n.s.)		(.05)	
Advanced Degree	44	64	59	66	68	76	62	70
	(n.s.)		(n.s.)		(n.s.)		(n.s.)	
Less than a B.A. Degree	50	71	13	56	-	-	45	66
	(n.s.)		(n.s.)		(n.s.)		(n.s.)	
Manner of Accession								
Entering	54	25	7	33	33	50	31	33
	(n.s.)		(n.s.)		(n.s.)		(n.s.)	
Re-entering	27	50	33	20	36	67	32	47
	(n.s.)		(n.s.)		(n.s.)		(n.s.)	
Transferring	67	100	33	75	50	50	50	73
	(n.s.)		(n.s.)		(n.s.)		(n.s.)	

(Table continued next page)

Note: Figures in parentheses show probability values for tests of significant differences.

Table 39 - Continued

Item	Per cent of teachers retained							
	Elementary		Junior High		Senior High		Total	
	T	C	T	C	T	C	T	C
Sex								
Male	67	30	49	56	63	73	59	63
	(n.s.)		(n.s.)		(n.s.)		(n.s.)	
Female	41	60	27	65	54	56	42	60
	(.02)		(.001)		(n.s.)		(.02)	
Previous Teaching Experience								
0 Years	54	25	8	25	23	50	28	31
	(n.s.)		(n.s.)		(n.s.)		(n.s.)	
1 Year	43	42	33	50	33	0	36	37
	(n.s.)		(n.s.)		(n.s.)		(n.s.)	
2-5 Years	35	65	42	52	54	41	44	55
	(.05)		(n.s.)		(n.s.)		(n.s.)	
6 or More Years	46	62	53	70	69	76	61	70
	(.10-.20)		(n.s.)		(n.s.)		(n.s.)	
Age								
35 and Under	23	31	25	31	27	27	25	30
	(n.s.)		(n.s.)		(n.s.)		(n.s.)	
36-60	61	74	71	78	81	80	75	78
	(n.s.)		(n.s.)		(n.s.)		(n.s.)	
61 and Over	39	63	40	70	54	67	46	66
	(n.s.)		(n.s.)		(n.s.)		(.05)	

Table 40

Summary of Teacher Retention in Target (T) and Comparison (C) Elementary Schools

Item	Per cent of teachers retained		Per cent difference (C minus T)	p
	Target	Comparison		
Total Elementary Sample	45	57	12	.10-.20
Marital Status				
Single	47	61	14	n.s.
Married	43	55	12	n.s.
Education				
B.A. - B.S.	40	51	11	n.s.
Advanced Degree	44	64	20	n.s.
Less than a B.A. Degree	50	71	19	n.s.
Manner of Accession				
Entering	54	25	-29	n.s.
Re-entering	27	50	23	n.s.
Transferring	67	100	33	n.s.
Sex				
Male	67	30	-37	n.s.
Female	41	60	19	.02
Previous Teaching Experience				
0 Years	54	25	-29	n.s.
1 Year	43	42	-1	n.s.
2-5 Years	34	65	31	.05
6 or More Years	46	62	16	.10-.20
Age				
35 and Under	23	31	8	n.s.
36-60	61	74	13	n.s.
61 and Over	39	63	24	n.s.

Table 41

Summary of Teacher Retention in Target (T) and Comparison (C)

Junior High Schools

Item	Per cent of teachers retained		Per cent difference (C minus T)	p
	Target	Comparison		
Total Junior High Sample	39	61	22	.01
Marital Status				
Single	42	63	21	.10-.20
Married	38	60	22	.02
Education				
B.A. - B.S.	37	61	24	.02
Advanced Degree	59	66	7	n.s.
Less than a B.A. Degree	13	56	43	n.s.
Manner of Accession				
Entering	7	33	26	n.s.
Re-entering	33	20	-13	n.s.
Transferring	33	75	42	n.s.
Sex				
Male	49	56	7	n.s.
Female	27	65	38	.001
Previous Teaching Experience				
0 Years	8	25	17	n.s.
1 Year	33	50	17	n.s.
2-5 Years	42	52	10	n.s.
6 or More Years	53	70	17	n.s.
Age				
35 and Under	25	31	6	n.s.
36-60	71	78	7	n.s.
61 and Over	40	70	30	n.s.

Table 42

Summary of Teacher Retention in Target (T) and Comparison (C) Senior High Schools

Item	Per cent of teachers retained		Per cent difference (C minus T)	p
	Target	Comparison		
Total Senior High Sample	59	66	7	.10-.20
Marital Status				
Single	60	78	18	.10
Married	59	58	-1	n.s.
Education				
B.A. - B.S.	57	64	7	n.s.
Advanced Degree	68	76	8	n.s.
Less than a B.A. Degree	-	-	-	n.s.
Manner of Accession				
Entering	33	50	17	n.s.
Re-entering	36	67	31	n.s.
Transferring	50	50	0	n.s.
Sex				
Male	63	73	10	n.s.
Female	54	56	2	n.s.
Previous Teaching Experience				
0 Years	23	50	27	n.s.
1 Year	33	0	-33	n.s.
2-5 Years	54	41	-13	n.s.
6 or More Years	69	76	7	n.s.
Age				
35 and Under	27	27	0	n.s.
36-60	81	80	-1	n.s.
61 and Over	54	67	13	n.s.

SECTION V

THE RELATIONSHIP OF TEACHER RETENTION AND SOCIO-ECONOMIC STATUS OF THE SCHOOL DISTRICT

In this section an attempt is made to assess the relationship of socio-economic status of school districts and teacher retention. Results described in Section IV suggest that school level, sex, and age, may be factors of particular importance. Previous teaching experience also will be investigated since the differences appeared substantial, although sample sizes were very small. To "purify" the samples of low and middle income schools, senior high schools were dropped from the analysis. Elementary and junior high schools were combined to increase sample size.

Results are shown in Tables 43 and 44. Table 43 shows retention rates of male elementary and junior high school Target and Comparison teachers for various ages and levels of experience. If differences in retention do exist, they can not be attributed to differences in age, sex, teaching experience, or school level. Differences in retention may be attributed to socio-economic status of the school areas studied or to some other factor not investigated.

The number of males became so small when controlled for several factors that it was impossible to test all age and experience levels. In all cases where tests were possible, results were not significant. Table 43 shows further that retention in Target schools was generally higher than retention in Comparison schools. Thus, no pattern of consistently higher retention in Comparison schools was observed. Retention of males was also compared at various levels of experience without regard to age (in order to build up the sample size) and again results were negligible. See Table 45. In short, the evidence for this sample strongly suggests that if the socio-economic level of the school area has any influence at all on male teachers it is negligible in terms of its influence on retention and in comparison with other factors influencing retention.

A comparison of retention among female, elementary and junior high Target and Comparison teachers for various age levels and amounts of experience is shown in Table 44. When female teachers were equated for school level, age, and amount of experience, consistent and significant differences in retention occured which could not be attributed to chance. First, when school level (alone) was equated the difference in retention of Target and Comparison females was substantial. Thirty-five per cent of all Target elementary and junior high female teachers were retained compared with 62% of all Comparison elementary and junior high female teachers ($p < .001$).

Next, when the samples were equated for school level and age substantial differences continued to occur at all age levels. Thirty-one per cent of Comparison female teachers age 35 and under were retained compared with 12% of Target female teachers in this age group ($p < .10$). Retention of female teachers aged 36-60 was significantly higher for Comparison teachers (80% to 56%; $p < .05$) as was retention of female teachers age 61 and over (67% to 38%; $p < .05$). The size of these differences (18%, 22%, 29%) did not vary greatly from the size of the difference between all Target and Comparison females uncontrolled for age (27%), but sample sizes were much smaller.

Finally, when the two samples of female teachers were equated for school level, age, and experience evidence of differences in retention still existed although this evidence was not as strong as in previous comparisons. Sample sizes were greatly diminished and even apparently large differences did not attain statistical significance. Three of the eight tests were significant at the .20 level or beyond. Of equal importance is the fact that retention in Comparison schools was consistently higher at all age levels and for all amounts of experience with the sole exception of female teachers age 35 and under with 0-1 years of experience.

The foregoing evidence seems to indicate that socio-economic level of school districts may be an influential factor in retention of female teachers at the elementary and junior high school level in the Minneapolis Public School System. If this is the case, it also appears that the influence is at least as great among older, experienced teachers as it is among young, beginning teachers. It is almost certain that socio-economic conditions of school areas played an inconsequential part in the retention of male teachers for this particular sample and over the time period studied.

Table 43

Retention of Target and Comparison Male Elementary and Junior High School Teachers

by Age and Amount of Previous Experience

Age and Experience	Target			Comparison			Target and Comparison			Tests of significance Target vs. Comparison	p
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63			
	N	N	%	N	N	%	N	N	%		
Age 35 and Under											
0-1 Years Exp.	13	6	46.2	11	5	45.4	24	11	45.8	n.s. Finney	n.s.
2-5 Years Exp.	19	8	42.0	9	2	22.2	28	10	35.7	n.s. Finney	n.s.
6+ Years Exp.	3	0	-	3	0	-	6	0	-	No Test	-
Total	35	14	40.0	23	7	30.4	58	21	36.2	.17 (Yates)	n.s.
Age 36-60											
0-1 Years Exp.	2	2	-	1	0	-	3	2	-	No Test	-
2-5 Years Exp.	11	8	72.7	7	6	85.7	18	14	77.8	n.s. Finney	n.s.
6+ Years Exp.	16	12	75.0	22	14	63.6	38	26	68.4	.15 (Yates)	n.s.
Total	29	22	75.9	30	20	66.7	59	42	71.2	.24 (Yates)	n.s.
Age 61 and Over											
0-1 Years Exp.	0	-	-	0	-	-	0	-	-	-	-
2-5 Years Exp.	0	-	-	0	-	-	0	-	-	-	-
6+ Years Exp.	4	2	-	2	1	-	6	3	-	No Test	-
Total	4	2	-	2	1	-	6	3	-	No Test	-
All Male Teachers	68	38	55.9	55	28	50.9	123	66	53.7	.13 (Yates)	n.s.

Table 44

Retention of Target and Comparison Female Elementary and Junior High School Teachers by Age and Amount of Previous Teaching Experience

Age and Experience	Target			Comparison			Target and Comparison			Tests of significance Target vs. Comparison	p
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63			
	N	N	%	N	N	%	N	N	%		
Age 35 and Under											
0-1 Years Exp.	23	4	17.4	16	2	12.5	39	6	15.4	.01 (Yates)	n.s.
2-5 Years Exp.	16	1	6.3	17	6	35.3	33	7	21.2	2.60 (Yates)	.10-.20
6+ Years Exp.	3	0	-	9	5	55.6	12	5	41.7	Finney's tables	n.s.
Total	42	5	11.9	42	13	30.9	84	18	21.4	3.46 (Yates)	.05-.10
Age 36-60											
0-1 Years Exp.	4	3	-	6	6	100.0	10	9	90.0	Finney's tables	n.s.
2-5 Years Exp.	14	7	50.0	17	14	82.4	31	21	67.7	2.34 (Yates)	.10-.20
6+ Years Exp.	22	13	59.1	42	32	76.2	64	45	70.3	1.28 (Yates)	n.s.
Total	40	23	57.5	65	52	80.0	105	75	71.4	5.07 (Yates)	.05
Age 61 and Over											
0-1 Years Exp.	0	-	-	0	-	-	0	-	-	-	-
2-5 Years Exp.	5	2	-	7	5	71.4	12	7	58.3	Finney's tables	n.s.
6+ Years Exp.	24	9	37.5	35	23	65.7	59	32	54.2	3.46 (Yates)	.05-.10
Total	29	11	37.9	42	28	66.7	71	39	54.9	4.58 (Yates)	.05
All Female Teachers	111	39	35.1	149	93	62.4	260	132	50.8	17.86 (Yates)	.001

Table 45

Retention of Target and Comparison Elementary and Junior High School Teachers

by Sex and Amount of Previous Teaching Experience

Previous Teaching Experience	Male						Female					
	Target			Comparison			Target			Comparison		
	On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63		On staff 1958-59	Still on staff 1962-63	
	N	N	%	N	N	%	N	N	%	N	N	%
0-1	15	8	53.3	12	5	41.7	27	7	25.9	22	8	36.4
2-5	30	16	53.3	16	8	50.0	35	10	28.6	41	25	61.0
6 or More	23	14	60.9	27	15	55.6	49	22	44.9	86	60	69.8

Years of Experience	Target vs. Comparison Retained vs. Not Retained			
	Males		Females	
	Chi-square	p	Chi-square	p
0-1	.05	n.s.	.23	n.s.
2-5	.01	n.s.	6.73	.01
6 or More	.01	n.s.	7.09	.01

d.f. = 1 for all comparisons

SECTION VI

DISCUSSION

This investigation has focused on teacher retention within the school districts of one city in the 500,000 population range. As such, there are several restrictions on generalization of results. First, retention in the same school was studied. An investigation of teacher turnover or teacher loss could have resulted in different conclusions - although we suspect the general conclusions would be the same. Second, the focus on movement within the city, limits the range of socio-economic differences and many factors which might influence teacher retention. Although Target and Comparison samples clearly differed on certain socio-economic variables the differences must be considered small in relation to the socio-economic range in our society as a whole.[1] For example, if Target schools had been contrasted with suburban Minneapolis schools the average difference in family income could have been as high as $5,000 instead of $2,400. Target schools had less than one-fourth non-white students and only one school had more than half its students who were non-white. In some cities non-white students constitute over 90% of the population in ghetto schools while other schools in the city are completely unintegrated. Other things being equal, one might expect that when the entire socio-economic range is considered the relationship between teacher turnover and socio-economic level of the school district would be greater than that exhibited in this study. In view of the almost innumerable confounding factors, however, this relationship may be difficult to demonstrate. Charters (1956), for example, controlled a few of these factors and found no relationship between wealth of school district and teacher turnover.

---

[1] School 4 (Table 1) was probably a poor selection for the Comparison sample since the income level was below the city average. On nearly every variable studied, including retention, school 4 more nearly resembled a Target school than a Comparison school.

In view of the differences in retention between the Target and Comparison samples some of the factors not considered in this study should be pointed out. First, the fact that all schools were within the same school system rules out certain factors which are frequently investigated in studies of teacher turnover. It seems unlikely that student-staff ratio, equipment and supplies, building facility, financial allocation, teacher organizations, administrative policy, or salary structure played an important part in the movement of teachers within the system in any consistent biased direction. (In fact, in view of recent federal allocations for disadvantaged area schools such bias as does exist probably favors the Target schools. However, at the time the study data were collected such allocations were not a major factor and our best judgment is that the factors mentioned were, on the average, equal for the two samples.) Of course, it is possible that these factors played an important part in terms of loss to other school systems. Other factors which were probably not influential were size of school system, size of community, housing, access to higher education facilities, school board policy, opportunity for advancement, and fringe benefits.

On the other hand, some factors which were not explored in this study could have played a part in determining differences in teacher retention in low and middle income area schools. These factors include teacher's race, distance from home, reasons for transfer, student turnover, and opportunities to teach in area of academic preparation.

Some evidence is available for several of these factors. Race of teacher was not investigated due to lack of racial identification and the small number of non-white teachers known to be teaching in the system at the time of the study. Less than three per cent of all teachers were non-white. Non-white teachers tended to be concentrated in Target schools, however. Regardless of whether this concentration occurred by assignment or transfer it could have had an influence on retention. In view of the relatively small number of teachers involved, however, non-white concentration in Target schools seems a factor of negligible importance for this study.

Student turnover was correlated significantly with teacher turnover. The rank-difference correlation for the eleven elementary schools was .660 ($p < .05$). Children in Target elementary schools moved twice as often as Comparison elementary school children (Faunce, Bevis, & Murton, 1965). This finding supports the view of Radar (1962) who thought that teachers in schools with high student mobility might be prone to turnover because they received little psychic income from observing individual progress in transient children. Rapid student turnover made observation of progress impossible.

Low income area teachers assigned to teach specific subjects were less likely to have been educated to teach these subjects than were high income area teachers (Bureau of Field Studies, 1964, p. 44). The discrepancy between preparation and assignment was particularly acute in the junior high schools. Eighty per cent of the teachers teaching physical and biological sciences in high income area junior high schools had majored in teaching physical and biological sciences. By contrast, in low income area junior high schools, only 38% of the teachers had been prepared for this field of teaching. A similar discrepancy existed among teachers of language arts (82% vs. 71% prepared). No evidence is available to explain these large and important differences in subject assignment. It seems reasonable to assume that much of the difference may be attributed to age and transfer. Older teachers, with greater seniority tend to transfer into positions which are in accordance with their training. Younger teachers, who make up an unequal proportion of Target school staffs, are probably less likely to be assigned to their areas of preparation during their first year of teaching. It should be noted, however, that the evidence does not say that Target school teachers are not being assigned to their area of preparation. The evidence merely indicates that a much greater proportion of Comparison school teachers of certain subjects were prepared to teach those specific subjects.

The hesitant language used in Section V, when discussing the relationship between teacher retention in Target and Comparison schools, should be clarified. This hesitancy has nothing to do with the differences in retention between teaching staffs in low and middle income schools. The differences are there. The differences are large. And the differences have vast import for the school system, the community, and the children. The hesitancy occurs when one attempts to explain the "causes" of these differences. Is low retention in Target schools caused by factors related to the economic level of the neighborhood? This investigation suggests that it is, at least in some small way, but it does not define which socio-economic factors are involved. At best the study delimits the area of exploration and gives a rough estimate of the amount of variance in teacher retention which might be related to socio-economic variables.

W. W. Charters expressed the view that most of the variance of teacher retention can be explained very simply by age, sex, and length of experience. These three variables are major components of what he calls "career orientation." Career orientation, in its simplest terms, refers to whether a person intends to make teaching a career, sees teaching as a stepping stone to greater responsibility, or sees teaching as a short term occupation prior to marriage and rearing a family. Browning (1963) has reiterated this view. Results of the present study support Charters' theory. Most of the accountable variance whether it is in terms of sex, age, experience, or education may be related to "career orientation." At the same time, when all these factors were equated significant differences in retention between female teachers in low and middle income schools were still found. The correlations between retention and socio-economic level of the school district were of low magnitude, ranging from approximately .20 to .30. The size of these correlations suggests that the variance in teacher retention related to socio-economic factors, in Minneapolis, may be in the neighborhood of 5% to 10%. This "small" contribution can, of course, have large practical consequences.

The comparison of teaching staff characteristics showed that Target school teachers were younger, less experienced, less likely to have advanced degrees or to be without four year degrees, and more likely to be hired directly from college than their Comparison school counterparts. All of these factors were indices of low retention. This is not a circular argument since staff characteristics described the staffs for 1958-59 through 1962-63 while the retention study was based on the 1958-59 staff only. Furthermore, Target schools were consistently assigned a higher proportion of young, inexperienced teachers year after year. On the average, about five of ten teachers acquired by Comparison schools each year had some previous teaching experience. Approximately three out of ten acquisitions were transfers from other Minneapolis public schools and two out of ten teachers were returning to teaching after at least one year's absence. Four out of ten Target school acquisitions had taught before, but the majority of this group had not taught for at least a year. In junior high schools one out of three new Comparison teachers were obtained by transfer. In Target junior high schools transfers accounted for less than one out of ten newly acquired teachers.

In short, Target schools were staffed with teachers who were much less likely, as a group, to be oriented toward teaching as a career. New teachers coming to these schools also tended to be turnover prone. Comparison school staffs had substantially more career oriented teachers and in addition continued to acquire teachers who were more likely to be career oriented than teachers acquired by Target schools. The saying "success breeds success" (or failure breeds failure) is appropriate to the situation. Once a school loses a given portion of career teachers it is probable that subsequent retention becomes more difficult in some exponential way.

The variance in teacher retention related to "socio-economic factors" covers a lot of ground. The major socio-economic factor considered when one discusses high and low income schools is typically the conflict in "value orientations" of middle class teachers and "lower class" children. This conflict is an interesting and dramatic field of enquiry, but it is certainly not the only explanatory socio-economic factor. Winget (1952) pointed out that teachers who transfer within a system typically relocate in schools closer to their homes. Since most low income schools lie in the inner city and since most teachers reside in middle income neighborhoods, a natural tendency exists for teachers to leave the inner city. It is possible, therefore, that socio-economic factors not directly related to teacher value orientations play an important part in explaining differences in teacher retention. (Living in the suburbs may, of course, be related to value orientation.)

Retention of clerical staff in Target and Comparison elementary schools was investigated as a variable which might be related to teacher retention. All Comparison school clerks were retained in the same schools throughout the period of time studied. Less than one-third of Target school clerks worked in the same school for the five year period. It appears that turnover is contagious or at least contiguous. Students, teachers, and clerks in low income schools tend to have higher turnover rates than their counterparts in higher income sections of the city. Whether the causes of turnover for the various groups all have a common base, or whether turnover of one group begets turnover of another is a matter for further investigation. In some way, they are all related to economic level of the school district.

Several studies offer some support for the potency of the value conflict theory. Wandt and Aidman (1955) reported that 50% of 1600 student teachers in New York City felt that restriction on the socio-economic level of pupils would contribute to the "ideal teaching job." (Presumably, restriction to upper income groups.) Furthermore, 75% mentioned "absence of discipline problems" and 40% wanted a restriction in the range of mental ability to "average or better." The authors suggested that such ideals among prospective teachers contribute to high turnover in low income schools.

Groff (1963) asked 294 teachers in ghetto schools of one large city to give the main reason for high turnover among teachers in low income schools. Forty per cent mentioned "peculiarities" in the personalities of disadvantaged children as the major cause of teacher dissatisfaction. Over one-third of the teachers mentioned deficiencies in the school administration and approximately one-fifth mentioned the teacher's lack of understanding or acceptance of disadvantaged children.

Murton, Faunce, and Neale (1966) cite an unpublished study of Minneapolis elementary school teachers in which 31% stated a preference for teaching children who were _not_ culturally disadvantaged. Approximately half (48%) of these teachers claimed that cultural background made no difference and 21% expressed a preference for teaching disadvantaged children.

None of these studies gives direct evidence that the expressed opinions are related to turnover behavior. If much weight is to be given to expressed opinions, then the evidence overwhelmingly relegates value conflict to playing a minor role in teacher loss, and probably in teacher turnover. Thus, between 51% (Gordon, 1963) and 75% (Hill, 1958) of beginning teachers planned to give up teaching, _regardless of their job satisfaction_. Reports, ad infinitum, tell of the importance of "the family" as a "reason" for female teacher termination, (Anon, 1963; Browning, 1963; Fisher, 1963; Minnesota Education Association, 1959-1960). Browning (1963) reported that 87% of the terminating teachers in his study said they would welcome a chance to return to work in the same school system. Based on expressed opinions the evidence is overwhelming that most terminating teachers are not quitting because of job dissatisfaction, but because of personal reasons often unrelated to the job. Most of this evidence refers to female teachers.

One of the few controlled studies conducted on this topic supported the opinion surveys in suggesting that value conflict is of relatively minor importance in teacher turnover. Using a Likert-type scale Charters (1965) measured intrinsic job satisfaction of teachers in the St. Louis, Missouri school system. He concluded that "Compared with that of the morale measures, the contribution of two indicators of differing outlooks on work - sex and age - to teacher mobility is large." Hoehn's (1954) systematic investigation of teacher discrimination against lower class children offers support to both proponents and opponents of value conflict theory.

Hoehn found differences in the kinds of contact between teachers and children from high and low social classes, but not differences in amount of contact. "Working together" contacts were greater for higher social class children. Opponents of value conflict theory may take succor from Hoehn's report that the magnitude of the differences was "small" and that discriminatory behavior was not consistent. Some teachers consistently favored high social class children while at least one consistently favored lower class children. Other teachers showed no predictable behavior. Even if the most unfavorable implications of Hoehn's study are accepted, the relative contribution of this form of teacher behavior - and presumably student reaction to this behavior - to teacher retention is indefinite.

Going beyond the data, a theoretical explanation of teacher retention is offered below. This approach follows Charters, in the main, but also suggests the part that socio-economic factors may play in differential retention.

> There is a difference in teacher retention between low and middle income area schools.
>
> Teacher retention in low income area schools is consistently lower than teacher retention in middle income area schools.
>
> This difference in retention is not caused directly by differences in economic level of the children or by value-conflict between middle income teachers and low income children and parents.
>
> The direct, immediate cause of the differential retention rate is the fact that turnover - prone teachers enter low income schools while career oriented teachers, who are not prone to turnover, enter middle income schools.[1] Teachers of the type entering low income schools would probably terminate regardless of where they taught. Teachers of the type entering middle income schools would probably not terminate regardless of where they taught. (Consider, for example, a male teacher with 20 years seniority whose request for transfer to an outlying school is denied. On the average, it is unlikely that he would resign.)

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[1] The word "enter" does not imply beginning teachers. Entrance can occur through transfer, assignment, etc. Although the word is awkward it seems preferable to alternate terms such as "assign" or "place" since these terms carry other connotations.

> Differential assignment develops from historical, ecological factors rather than current administrative policy. Inner city schools, being the only schools in the early days of the city's growth, were originally staffed with "career" teachers. As the city expanded and built new schools further from the city center a proportion of these career teachers were transferred to staff the new schools.
>
> Deteriorating economic conditions in the city center, and increasing affluence in the outlying areas, stimulated other downtown teachers to move to outlying areas where there was better housing, newer schools, and neighbors of similar educational and economic backgrounds.
>
> This trend to the outlying areas began slowly with but a few teachers involved. However, once a given proportion of career teachers in a school was replaced with young, inexperienced, turnover-prone teachers the exodus increased at an exponential rate. A certain proportion of career teachers is needed in a school in order to maintain its staff stability. Once that proportion drops below the tipping point the burden on career teachers remaining in the low income school becomes increasingly great and they also seek an easier way of life by moving to outlying areas. As each career teacher leaves, the burden on the remaining career teachers increases, unless the replacements are also career teachers.
>
> Value conflict is a catalytic factor operating in concordance with many other factors (such as improved transportation) which speeds up the process. As the proportion of careers teachers in an inner city school diminishes, the discipline of the school also diminishes. Once passed the tipping point, the burden of responsibility for discipline placed on the shoulders of remaining career teachers becomes unbearable.
>
> A small core of career teachers remains in the inner city schools for idiosyncratic reasons or by reason of Becker's adaptive process. However, the majority of teachers in these schools will be, year after year, the young, inexperienced, turnover-prone teacher.

Several implications for reducing teacher turnover in low income schools stem from this theoretical view. First, it suggests that greater payoff may be obtained by focusing on factors related to retention other than socioeconomic factors. Unfortunately, many of these unrelated factors seem beyond the reach of school and college administrators. But not all. Consider age. The 85% turnover rate among young teachers age 26 and under in this study is typical of the problem of teacher retention among young beginning teachers. On the other hand, the retention of persons entering teaching for the first time at an advanced age was extremely good (see Tables 43 and 44). Increased publicity and support for persons of advanced age who wish to become teachers would appear to be a good investment. In terms of "man years" in the profession, there is no evidence that 45 year old beginners would contribute less than 25 year old beginners. Obviously recruiting older teachers will not meet all needs. What can be done to improve retention amoung younger teachers? Several standard techniques have been suggested. Andree (1957) and Dunn (1961) pointed out the values of exit interviews in improving retention. In the light of the many studies indicating that most teachers do not quit because of dissatisfaction with their jobs it would seem that ex-teachers would be prime recruiting sources. Family conditions which caused the termination may have changed. Browning's report that 87% of terminating teachers would welcome a chance to return to the same district is food for thought. A six-month or a one-year postal card follow-up to terminating teachers might bear great dividends.

The simplest device for improving teacher retention among young, beginning teachers is frequently overlooked. Beginning teachers should be informed, hopefully while in college, that teaching and rearing a family are not incompatible. This idea is gradually gaining headway, but many young people never consider the possibility. Their conceptions are "either-or." Alternatives are not considered - unless someone supplies the alternatives.

Studies in the insurance industry (Weitz & Nuckols, 1955; Weitz, 1956) as well as among teachers (Gordon, 1963) point out the importance of giving an accurate picture of the job before the person is hired. Beginners who knew what the job was all about, subsequently had higher job satisfaction and lower turnover. Knowledge of a specific school, or area of the city, would seem to be of crucial importance to the retention of teachers in low income schools. Along these lines, it appears that teachers' colleges could do much to change the image of the "ideal" teaching position described by the students in Wandt's article. Perhaps such changes are already in the making. Recent federal assistance to low income schools plus private foundation support for "great cities" programs and the pioneer work at Hunter College and a few other schools have begun to lend an aura of prestige to teaching the disadvantaged. Hopefully this increased prestige will help lower teacher turnover, by attracting a greater number of career teachers.

A few of the many implications for future research may be mentioned. Certainly replication of the findings are needed, even within the Minneapolis system. Focus on female teachers, particularly in the junior high schools would seem parsimonious. Additional sampling of older female teachers and perhaps interviews with them might be revealing. Experienced teachers requesting transfer to low income schools would seem to be an excellent criterion group for studying characteristics of teachers of the disadvantaged. A comparison of turnover, loss, and retention appears in order. Finally, a need for investigating the school milieu rather than just teacher characteristics is suggested by findings of similar turnover among pupils and clerks.

APPENDIX

PERSONNEL PRACTICES

MINNEAPOLIS PUBLIC SCHOOLS

ASSIGNMENT OF PERSONNEL

Elementary Teachers. A teacher in the elementary school must have a bachelor's degree with a major in elementary education and hold a Minnesota State Certificate for teaching in the elementary schools.

Secondary Teachers. A teacher in the secondary school must have a bachelor's degree with a major in the area for which application is made and have a Minnesota State Certificate for teaching in the secondary schools.

Appointments. All appointments to positions are made from eligibility lists upon recommendation by the director of personnel to the superintendent of schools after approval of the assistant superintendent. Appointments to positions in the school system are made without designation to a particular building. Building assignments are usually made during the month of July. A candidate on the eligibility list is recommended for appointment on the basis of his qualifications to fill a particular position.

TRANSFER POLICY

Introduction

Purpose. Transfer and exchange of teachers is desirable and is encouraged in the Minneapolis Public Schools. The challenge of a new position, the stimulation of changed surroundings, the chance to extend one's circle of friends -- these and many other factors incident to a change of position mean increased effectiveness in the classroom, more friendliness and democracy in the school, and a higher morale throughout the entire teaching staff. To this end, teachers should feel free to request transfers at any time.

Bases for transfer. A number of factors determine which requests for transfer may be granted. In every case, first consideration must be given to the best interests of the boys and girls in the schools. In order to protect these interests of boys and girls, it is essential that the best possible staff be maintained in each building and in each section of the city. For this reason, it is not possible to grant all requests for transfers. However, whenever it is compatible with the best interests of boys and girls, the welfare and wishes of teachers should form the bases for transfers.

The superintendent of schools has the responsibility for the assignment of all personnel in the schools. When it is desirable or necessary to transfer teachers, and when such a transfer is to the best interests of boys and girls, the following procedure shall serve as a guide.

Definitions and General Regulations

Seniority defined.

1. By seniority is meant the greater number of years of consecutive employment as a probationary and tenure teacher in the Minneapolis Public

Schools, unless herein otherwise specified.

Definition of teacher.

2. The definition of "teacher" shall be the same as stated in the Tenure Law for Minnesota cities of the first class.

How seniority is established.

3. For purposes of establishing seniority, a year of employment shall mean a school year of at least nine months in which the teacher is employed by the Board of Education at least 75 per cent of the time.

Seniority rights.

4. Sabbatical leave, military service in time of national emergency, or a call to active duty in the military forces shall count as full time in determining seniority.

5. In all other cases of leaves of absence, teachers shall retain the seniority acquired at the time of taking leave, and a leave of absence shall not constitute a break in consecutive employment; but teachers who resign their positions and are later re-employed shall lose that seniority acquired before resignation.

6. In the case of a leave of absence of not more than one year's duration, a teacher shall also retain his seniority status in the building in which he was teaching at the time he went on leave.

7. The information in the files of the personnel department of the administrative offices shall be the basis for determining seniority, and the director of personnel shall be responsible for computing such seniority. He shall report upon request to a principal needing such information to decide upon a possible transfer, or to a teacher involved in such a decision, or to any other duly authorized person or group.

Teacher Requested Transfers

Formal requests for transfer.

1. A teacher may at any time request a transfer to a particular building or section of the city. The request shall be made on a "Request for Transfer" card and sent to the personnel department. When transfers are requested by teachers, first consideration shall be given such requests in filling a vacancy. If the teacher wishes it, no publicity shall be given such a request until steps are taken to effect the transfer. Transfers will generally be limited to the opening of school in the fall.

Probationary teachers.

2. In cases where the best interest of the teacher and the school system shall be served, a request for transfer from the probationary teacher at the end of the first year of employment will be honored. Only in the event of an emergency will a request for transfer be honored from the end of the second year until the close of the probationary period of employment.

Limitations.

3. In cases where an excessive number of transfers is requested from any one building or section of the city, the number to be considered at any one time shall be determined by the assistant superintendent and shall be based upon the needs of the school or the section involved.

Notification of decision.

4. The director of personnel and the assistant superintendent shall be responsible for reviewing all requests for transfers. In cases where requests cannot be honored, due to the over-all needs and interests of the school system, the teacher shall be notified.

Notification of vacancies.

5. The Personnel Department shall be responsible for notifying those persons requesting transfers of vacancies in specific buildings or areas.

Procedure.

6. The principal of the building to which the teacher has requested transfer shall be notified in writing at the time the transfer is being considered. A copy of this communication shall be submitted to the teacher and to the principal of the building from which the teacher requests transfer. The receiving principal may request an interview with the teacher; and if the transfer is not acceptable to the receiving principal, he must notify the director of personnel in writing within five days after the receipt of the transfer notice. The teacher shall then be notified and, if desired, he may request a meeting with either principal and/or the director of personnel and/or the assistant superintendent. The final recommendation shall be made by the assistant superintendent.

Time limitations.

7. Requests for transfers are kept for only the current school year. Renewals may be made each year.

Exchange transfers.

8. Any two teachers having comparable positions but in different schools within the system may request an exchange of positions for a year. If agreeable

to the director of personnel, the assistant superintendent, and to the principals of the schools involved, such exchange shall be effected without loss of seniority, and the teachers so exchanged shall be returned to their original positions at the end of the period of exchange under the same conditions and status as though there had been no exchange. Since exchanges of this sort appear to be highly desirable and beneficial, it shall be the duty of the director of personnel to set up procedures to facilitate such exchanges.

Needs in the Educational Program of a Building

Request for teachers with special interests and abilities.

1. At times a need arises in a building for a teacher with special interests and training (i.e., remedial reading, speech, journalism, health, sports, etc.) for which no person in the building is qualified and available.

2. In other cases, teachers with special abilities, interests, and qualifications for a particular assignment are located in a building where there is no opportunity for assignment in these special interest activities because others in the building are assigned to this work.

3. Principals of buildings who have a need for teachers with special interests and abilities shall so inform the assistant superintendent. Priority for this work shall be established by the assistant superintendent, and the director of personnel shall be so informed. This priority shall be observed in the assignment of personnel to a building.

Teachers requests for transfer to special interest fields.

4. Teachers desiring work in their special interest or activity field who have no opportunity for this work in their present building should confer with the director of personnel and make a request for transfer. Transfers shall be made by matching the qualifications and interests of an applicant to the particular position to be filled.

Determination of transferee.

5. If, because of personnel demands to meet particular needs of a building as determined by the principal and assistant superintendent, it is necessary for a building to transfer a teacher, the person to be transferred will be determined on the same basis as in the section "Declining Enrollment."

Declining Enrollment

Seniority.

When it becomes necessary to transfer a teacher because of declining enrollment, that person in the grade or department involved shall be transferred who has least seniority in the system. Should a situation arise in which two teachers have identical seniority in the system, seniority in the building shall be observed.

Exceptions.

1. A teacher transferred because of declining enrollment shall not be transferred again for a period of two years for the same reason except at his own request. This exemption does not apply to kindergarten teachers where there is no other probationary teacher in the department.

2. A probationary teacher shall be exempt from transfer because of declining enrollment from the beginning of his second year to the end of his probationary period.

3. A teacher who is sixty-two years of age or over shall not be transferred, except at his own request, unless there is no position available in his teaching field in the building.

4. A teacher performing a necessary school service in addition to classroom service for whom there is no adequate replacement shall not be transferred.

In cases where the exceptions cover all of the teachers in a given department where a position is to be closed, exceptions 1, 2, and 3 shall be waived in that order, and the teacher with the least seniority in the system will be transferred.

Notification.

The transferee shall be notified in writing by the personnel office at least four weeks before the close of the term, or four weeks before the transfer becomes effective, if the transfer is made effective within the term. This rule shall apply to transfers from building to building, and from positions in special fields to classroom positions, or vice versa. This does not preclude the making of temporary transfers necessitated by unforeseen changes in enrollment.

Notification of openings.

All teachers who are to be transferred shall be provided at their request with a list of openings for the following semester by the personnel office. The needs of the school shall be given primary consideration in filling vacancies when teachers are selected from the list of transferees.

Re-instatement to former position.

When a position is reopened after having been closed for two years or less, the transferred teacher shall be notified and shall be reinstated if he wishes to return to that position.

Administrative requests.

After assignments for the school year are completed and there exist teachers with no assignments in certain fields, the administration may request teachers who are teaching in their minor fields to fill vacancies in their major fields in order that surplus teachers may be placed according to their qualifications.

Location of preference.

Transfers of teachers from one building to another because of declining enrollment shall have preference over all other transfers.

Temporary Transfers

Definition.

1. Those made after the closing of the school year.

2. Those made because of temporary increase or unforeseen decline in school enrollment.

3. Those made after the expiration of the four-week notice period.

4. Those made necessary by unforeseen needs in other schools.

Return to former school.

Such transfers shall state that the teacher may return to the school from which transferred, provided that a position is open for which he is qualified.

Limitations on transfers.

Should no vacancy occur in the school from which the teacher was transferred, said teacher shall not be required to transfer again for two years.

Unsatisfactory Assignment

Adjustment procedure.

1. If a principal believes that a teacher's work is unsatisfactory because of current placement and assignment, he shall make all reasonable adjustments necessary for improvement.

Notification of teacher.

2. If after such adjustments are made the teacher's work remains unsatisfactory, the principal shall notify the teacher in writing by mid-year, clearly stating the reasons for his dissatisfaction and indicating further steps to be taken to effect improvement.

Corrective measures.

3. A copy of this notice shall be sent to the assistant superintendent, who shall also offer in writing corrective steps to be taken by the teacher after consultation with the principal and the teacher.

4. If the improvement in the work of the teacher is not satisfactory to the principal and the assistant superintendent by six weeks before the end of the school year, and if in the judgment of the assistant superintendent a change in placement and assignment indicates a possibility for satisfactory work, a transfer to another building may be made at the beginning of the next school year.

Notification to receiving principal.

5. When the receiving principal is notified in writing of the transfer, he shall be informed of the steps taken or to be taken in attempting to help the teacher make a satisfactory adjustment.

Permanent record.

6. The transfer record shall state the respects in which improvement was satisfactory or unsatisfactory. All records involving the transfer shall be signed by the teacher and placed in the teacher's permanent file.

Transfer to Special Assignment

Special assignment.

From time to time it becomes necessary to ask teachers to assist on some project or in a department of the Central Office. Usually such an assignment is temporary and is designated as a special assignment.

In the event a teacher is transferred from a classroom to a special assignment, his position shall be filled by a substitute until such time as the special assignment is terminated.

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